1962-1963

PROTO® TOOLS

PROFESSIONAL QUALITY TOOLS

PROTO HAND TOOLS CATALOG NO. PR62120

ALSO SEE SEPARATE NEW-TOOL SUPPLEMENT NO. PR 62120A
AND ADDITIONAL SUPPLEMENT NO. PR 62120B

HAND TOOLS
FOR ALL INDUSTRIES

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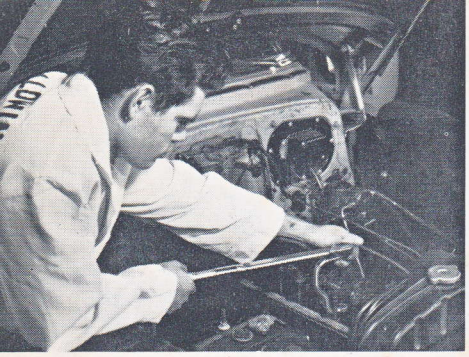

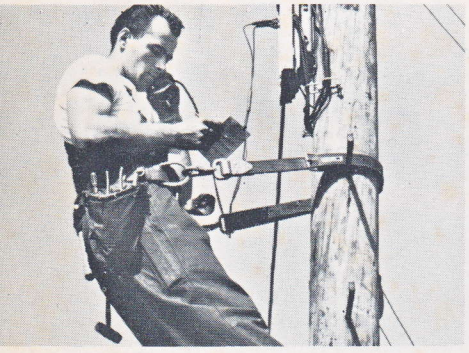

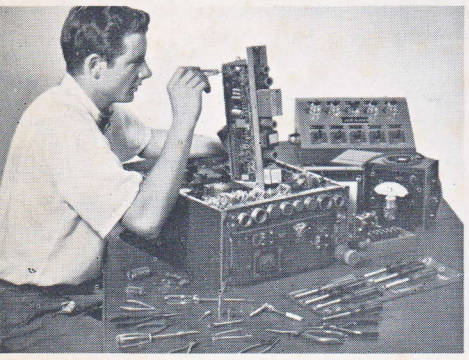

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

SKILLED TOOL USERS in every industry throughout the world prefer PROTO fine quality hand tools for professional work. In this catalog are over 2200 different tool models and sizes, making it possible to select the *right* tool for every job in every field... motors, machinery, transportation, communication, construction, marine, governmental activities, manufacturing, maintenance, plumbing, hobbies, farm and home use.

PROFESSIONAL QUALITY Proto tools are designed and manufactured to exceed rigid requirements of industries and professional tool users.

JOB-TESTED designs assure proper strength, lightness, balance and ease of handling.

DURABILITY of PROTO tools is due to the use of special alloy steels (PROTOLOY, Reg. U.S. Pat. Off.), skillful forging and scientific heat treatment. MODERN MANUFACTURING METHODS produce more accurately fitting tools for fast, safe use. The durability and efficiency of PROTO tools make them more ECONOMICAL in the long run than ordinary tools... BETTER BUYS.

GUARANTEE

PROTO tools are guaranteed to perform the work for which they are designed, and to last as long as is consistent with ordinary wear. Any tool found defective in workmanship or material, and returned to the Factory with transportation charges prepaid, will be replaced, repaired or credited at current prices (as deemed best by us), provided it has been used for the purpose for which the tool was designed. • Power and impact sockets are designed for power equipment, but standard thin-wall sockets are not intended for such use. Special tools not listed in our catalog or price list do not carry the regular guarantee, because they have been manufactured to the original purchaser's specifications. Also, tools that have been ground or altered in any other manner from their original design are not covered by the guarantee.

WHERE TO BUY PROTO TOOLS. Leading automotive, industrial, hardware, implement, plumbing and tool dealers and distributors throughout North America and abroad sell PROTO tools.

SPECIAL TOOLS of many types are designed and produced to order by PROTO for manufacturers and others for special purposes not covered by standard tools listed in this catalog. For information on any special tool problem see your PROTO distributor or write PROTO CONTRACT DEPARTMENT, giving your name, position, company and address.

PRICES, designs, finishes, steel analyses and other specifications are subject to change without notice.

GET IT FROM YOUR JOBBER

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- Tools arranged numerically with few exceptions. ● Spare parts listed page 75.
- See additional new tools in separate Supplement No. PR62120A and PR62120B.

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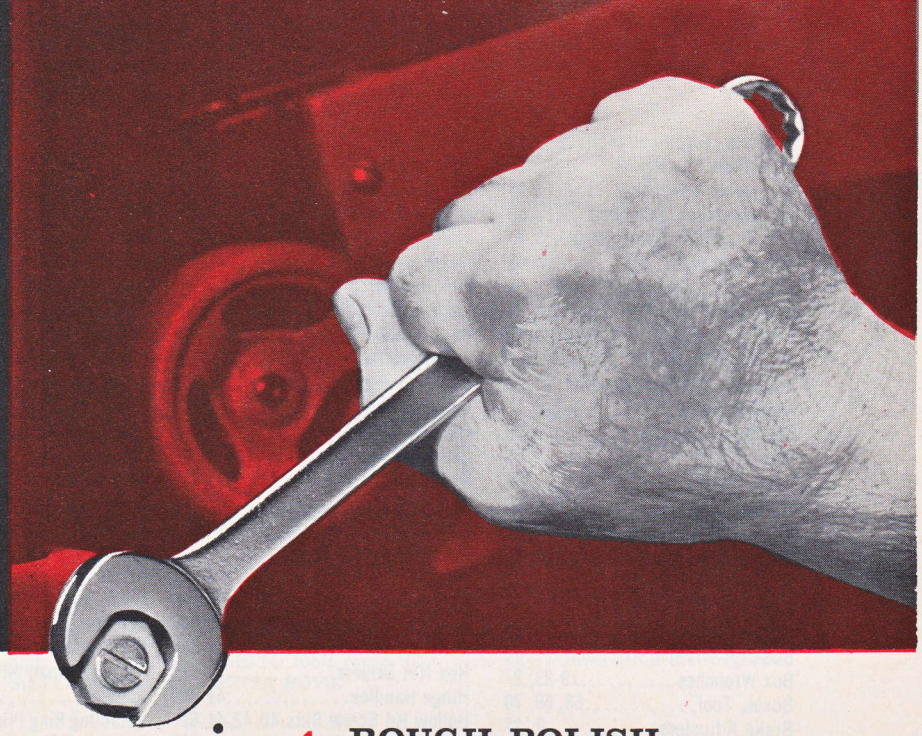
How Quality is Built into Proto Tools

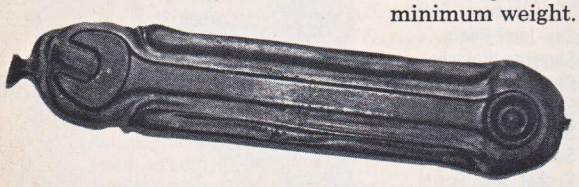


1. ALLOY STEEL

Our Protoloy® alloy has been developed for proper hardenability, toughness, and wear resistance: with carbon, chromium, boron, and manganese in proper proportions. A standard *jominy test* bar from every heat of steel is tested for hardness response. Only steel that tests show will make good tools is put into production.

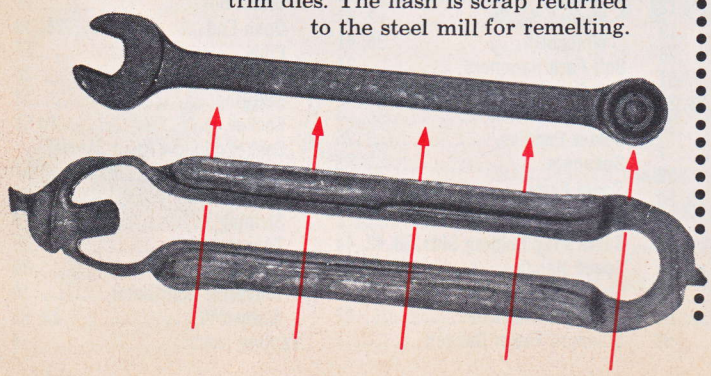
2. HOT FORGE

Alloy steels are pre-heated and forged under drop hammers. Hot forging shapes the steel and causes *grain flow*. Grain flow gives the steel and the tools maximum strength with minimum weight.



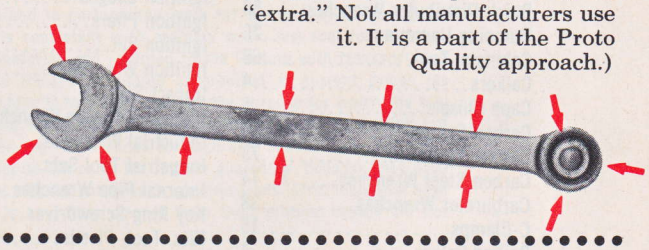
3. FLASH TRIM

Excess metal known as *forging flash* is trimmed from the wrench blank in accurately made hardened steel trim dies. The flash is scrap returned to the steel mill for remelting.



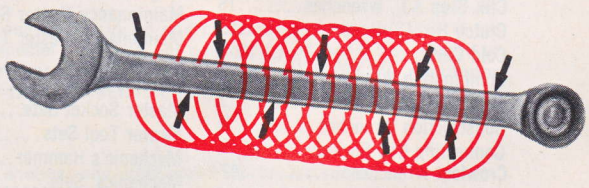
4. ROUGH POLISH

Roughness on the contours of trimmed wrench blanks is removed by hand belt polishing to smooth the contours of the wrench blank. (This operation is an "extra." Not all manufacturers use it. It is a part of the Proto Quality approach.)



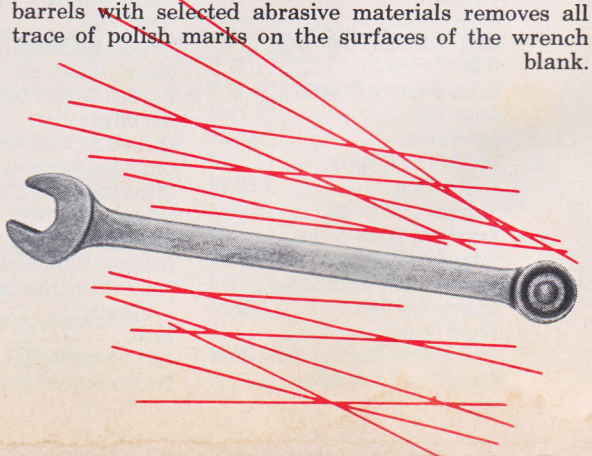
5. ROTARY POLISH SHANKS

Final shaping of the contours is done on belt polishing machines that remove all work marks on the wrench shank and blend the edges to a professional feel to the hand.



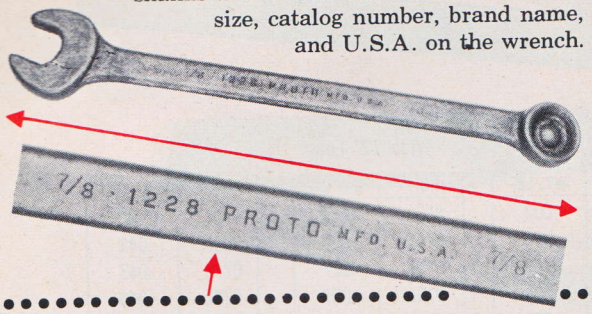
6. TUMBLE

A 4-to-8 hour tumble in slowly revolving rubber-lined barrels with selected abrasive materials removes all trace of polish marks on the surfaces of the wrench blank.

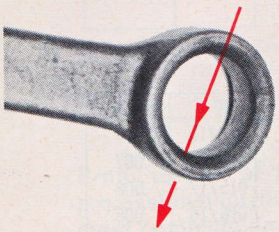


7. STRAIGHTEN AND MARK

Powerful hydraulic machines straighten the wrench shanks and at the same time impress the size, catalog number, brand name, and U.S.A. on the wrench.



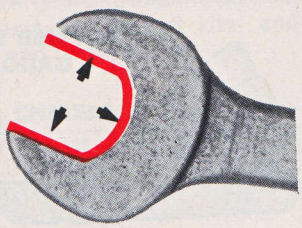
8. COLD SLUGGING BOX HEADS



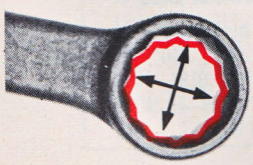
Forging leaves a *steel web* in the box heads of the wrenches. This web is punched out cold in powerful punch presses. This is called *cold slugging*. The slugs are returned to the steel mill for remelting.

9. BROACHING, OPEN END HEAD

Broaching is best known method of machining to close tolerance, leaving a dressed, finished surface. (Proto's skilled tool and die craftsmen make their own broaches.) Machine operators with *Go/No-go* gauges test broached openings frequently to assure continual conformity.



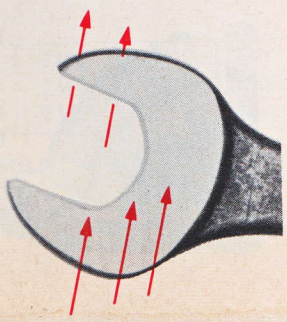
10. BROACH, BOX HEAD OPENING



This is the same operation as No. 9. (This "plus" operation takes the place of cold or hot slugging to approximate size. Broaching results in precise opening sizes—a part of Proto Professional Quality.)

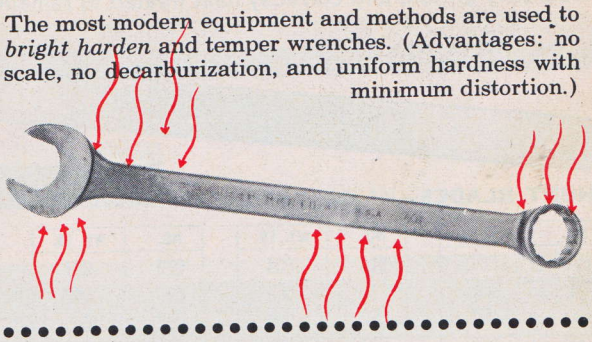
11. DOUBLE DISCING OF OPEN END FLATS

This is performed by placing the wrench head between two grinding wheels preset to tolerances. This grinding removes excess material, sizes head to required thickness, and applies the semi-finish grind all in one operation.

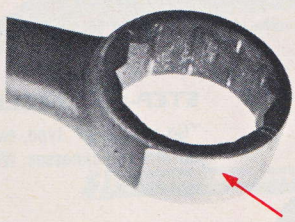


12. SCALE-FREE HEAT TREAT

The most modern equipment and methods are used to *bright harden* and temper wrenches. (Advantages: no scale, no decarburization, and uniform hardness with minimum distortion.)



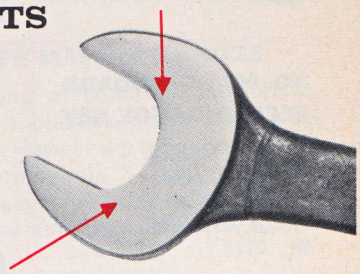
13. BUFF-POLISH OUTER WALLS OF BOX HEADS



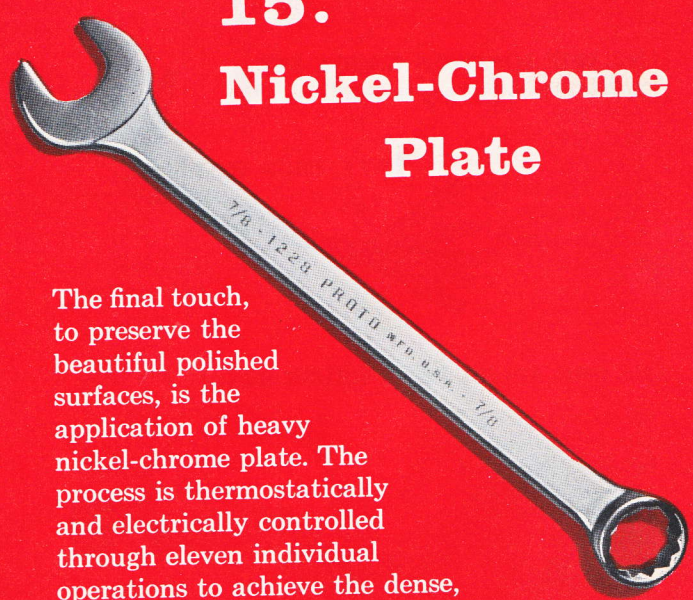
Mirror-like hand finish is applied to the outer walls of wrench box heads, using fine grit polish belt and grease compound. (Benefits: uniformly rounded surfaces to ease work in constricted areas, wrenches that are easy to keep clean; truly beautiful tools.)

14. BUFF-POLISH OPEN END HEAD FLATS

Several mechanical polishing operations, each progressively finer, produce the mirror-like buff finish which characterizes Proto wrenches.



15. Nickel-Chrome Plate



The final touch, to preserve the beautiful polished surfaces, is the application of heavy nickel-chrome plate. The process is thermostatically and electrically controlled through eleven individual operations to achieve the dense, tough, uniform plate on Proto wrenches.

FEELER GAUGES AND GAUGE SETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

STANDARD FEELER GAUGES

Accurately ground and correctly heat treated to remain true after long use.

SHORT BLADES—½" Wide, 3 1/16" Long

NO. *	WT., LB.
0015	.001
002	.001
003	.001
004	.002
005	.002
006	.003
007	.003
008	.004
009	.004

NO. *	WT., LB.
010	.004
011	.004
012	.004
013	.005
014	.005
015	.005
016	.006
017	.006
018	.007

NO. *	WT., LB.
019	.007
020	.008
022	.009
025	.010
030	.011
032	.013
035	.014
040	.016

LONG BLADES—½" Wide, 12" Long

NO. *	WT., LB.
0015L	.002
002L	.004
003L	.006
004L	.008
005L	.009
006L	.012
008L	.016
010L	.019
011L	.019
012L	.021

NO. *	WT., LB.
013L	.023
014L	.023
015L	.027
016L	.027
017L	.028
018L	.030
019L	.031
020L	.032
021L	.035
022L	.036

NO. *	WT., LB.
025L	.040
026L	.041
027L	.043
028L	.046
030L	.050
032L	.054
035L	.057
040L	.070

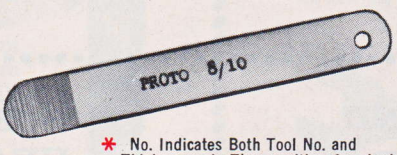
* No. Indicates Tool No. and Thickness in Thousandths of an Inch (Except 0015 and 0015L, Which Indicate Thickness in Ten Thousandths).

NO. 000C FEELER GAUGE HOLDER

For 3 1/16" feeler gauge blades.
Holds all available sizes.
Weight, .05 Lb.

STEP-CUT FEELER GAUGES

"Go and no-go" type, each blade having two different thicknesses. Width, ½". Length, 3 ¼".



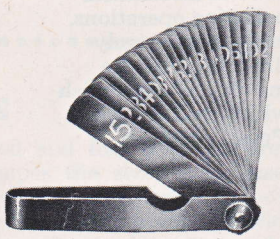
* No. Indicates Both Tool No. and Thicknesses in Thousandths of an Inch.

NO.*	WT., LB.
004/6	.002
005/7	.003
006/8	.003
007/9	.004
008/10	.004
009/11	.004
010/12	.006
011/13	.006
012/14	.006

NO. *	WT., LB.
013/15	.007
014/16	.007
015/17	.008
016/18	.008
017/19	.009
018/20	.009
019/21	.010
020/22	.010

NO. 000A STANDARD FEELER GAUGE SET

Nine short blades—
003, 004, 005, 006,
008, 010, 012, 015 and
018—in 000C holder.
Wt., .09 Lb.

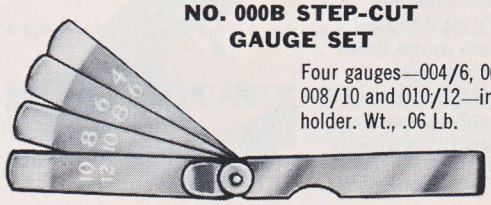


NO. 000AA STANDARD FEELER GAUGE SET

Master set, with 25 short blades—.0015 through 040, except 019—in 000C holder. Wt., .19 Lb.

NO. 000B STEP-CUT GAUGE SET

Four gauges—004/6, 006/8, 008/10 and 010/12—in 000C holder. Wt., .06 Lb.

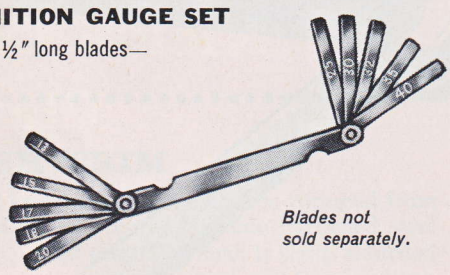


NO. 000BB STEP-CUT GAUGE SET

Master set, with eight gauges—004/6 through 011/13—in 000C holder. Wt., .08 Lb.

NO. 000D IGNITION GAUGE SET

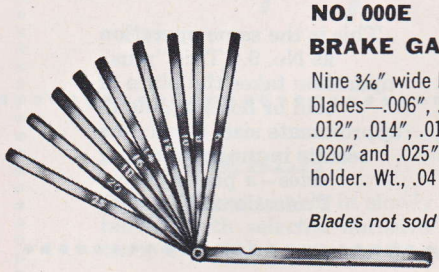
Ten 3/16" wide by 1 ½" long blades—
.013", .015",
.017", .018",
.020", .025",
.030", .032",
.035" and .040"
thick—in holder.
Wt., .03 Lb.



Blades not sold separately.

NO. 000E BRAKE GAUGE SET

Nine 3/16" wide by 4" long blades—.006", .008", .010", .012", .014", .016", .018", .020" and .025" thick—in holder. Wt., .04 Lb.

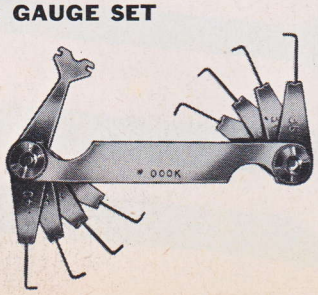


Blades not sold separately.

No. 000K SPARK PLUG GAUGE SET

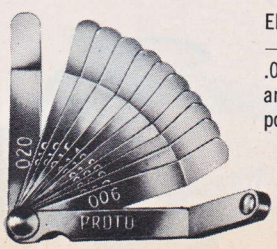
For checking spark plug gaps, includes electrode bender. Eight bent-wire gauges—.022", .025" .027", .028", .030", .032", .035" and .040" thick—in holder. Wt., .06 Lb.

Gauges not sold separately



NO. 000M BENT GAUGE SET

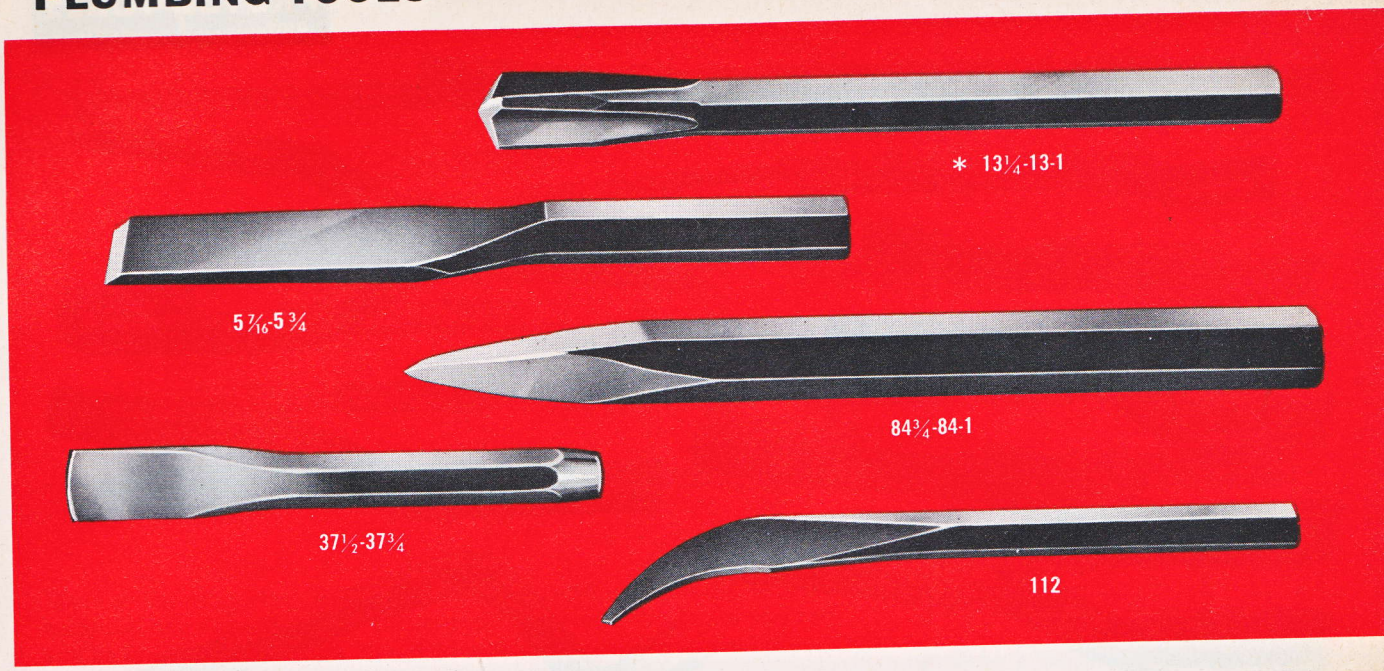
Eleven ½" by 4 3/16" bent blades —.006", .008", .010", .011", .012", .013", .014", .015", .018", .019" and .020"—in holder and plastic pouch. Wt., .15 Lb.



Blades not sold separately.

PLUMBING TOOLS

* Federal Specs.: GGG-D-691, Type I



Proto is one of the world's largest producers of professional quality plumbing tools, and provides the most complete line available. In addition to the specialized tools on this page and the next, you will find many others in this catalog needed for plumbing, heating, ventilating and air conditioning work, such as pipe wrenches; flare nut and adjustable wrenches; box, open end and combination wrenches; punches; chisels; pliers; screwdrivers; gear and bearing pullers; hammers; bars; tool chests, boxes and kits; and socket sets in ¼", ⅜", ½" and larger drives.

FLOOR OR WOOD CHISELS

NO.	STOCK SIZE	WIDTH OF CUT	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
5 7/16	7/16"	⅝"	4 ½"	10"	.36
5 ½	½"	¾"	4 ¼"	10"	.50
5 ⅝	19/32"	1"	3 ¾"	10"	.70
5 ¾	23/32"	1 3/16"	3 ½"	10"	1.00

* STAR DRILLS

13 ¼	¼"	¼"	...	12"	.16
13 5/16	¼"	5/16"	...	12"	.16
13 ⅜	5/16"	⅜"	...	12"	.26
13 ½	⅜"	½"	...	12"	.38
13 ⅝	7/16"	⅝"	...	12"	.52
13 ¾	½"	¾"	...	12"	.70
13 ⅞	19/32"	⅞"	...	12"	1.07
13-1	23/32"	1"	...	12"	1.52

SOIL PIPE CHISELS

37 ½	½"	⅝"	2 ⅛"	6 ½"	.35
37 ⅝	19/32"	¾"	2 ⅜"	7"	.57
37 ¾	23/32"	⅞"	2 ⅞"	7 ½"	.84

CONCRETE GADS

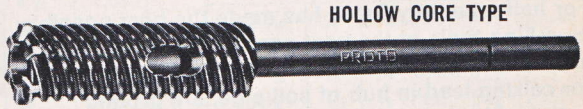
84 ¾	23/32"	...	2 ⅛"	12"	1.40
84 ⅞	13/16"	...	2 ½"	12"	1.80
84-1	15/16"	...	2 ¾"	12"	2.3

LEAD-PICKING TOOL

112	½"	3/16"	2 ⅜"	9"	.46

SOLID SHAFT TYPE

HOLLOW CORE TYPE



CARBIDE POWER TYPE MASONRY DRILLS

For fast, accurate drilling of concrete, tile, bricks, slate, marble, rock, stone, plastics, glass, steel, plaster, asphalt, micarta, etc. Have sharp tungsten carbide cutters and three or more spirals. Turned by electric or air drills. Solid type leaves no dead center. Hollow core type removes drilled materials quickly.

SOLID SHAFT TYPE

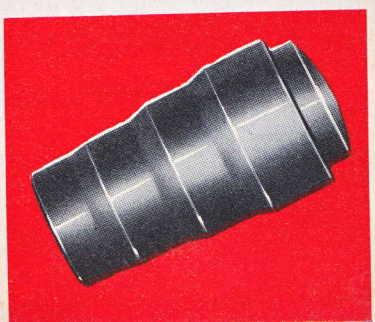
NO.	HOLE SIZE	SHANK DIAMETER	OVERALL LENGTH	WT., LBS.
11 3/16	3/16"	3/16"	4"	.03
11 ¼	¼"	¼"	5"	.06
11 5/16	5/16"	¼"	5"	.06
11 ⅜	⅜"	¼"	5"	.09
11 7/16	7/16"	¼"	5"	.11
11 ½	½"	¼"	6"	.18

HOLLOW CORE TYPE

12 ⅝	⅝"	⅜"	8"	.24
12 ¾	¾"	⅜"	8 ½"	.32
12 ⅞	⅞"	½"	9"	.54
12-1	1"	½"	9"	.60
12-1 ⅛	1 ⅛"	½"	10"	.78

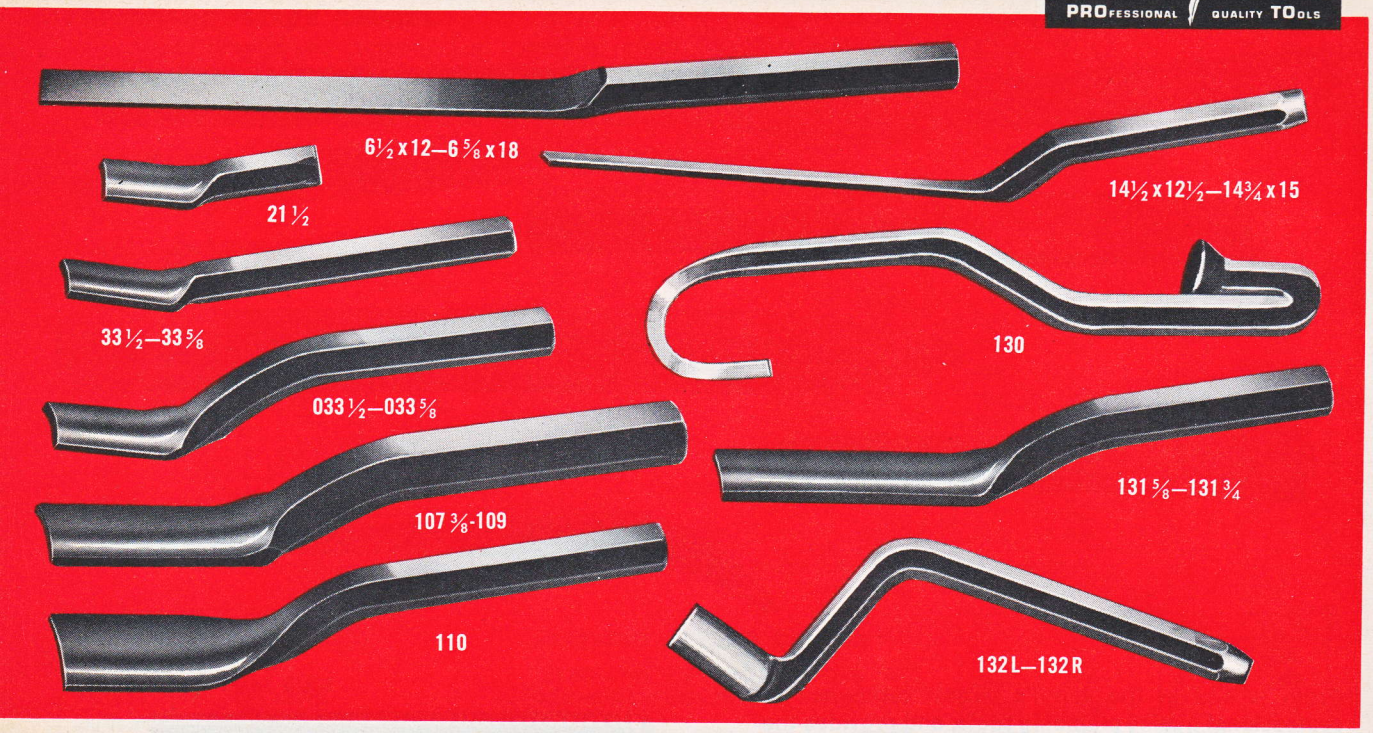
NO. 136 TUBING EXPANDER

A very handy tool for plumbers and all others who work with tubing. Three separate steps expand 1¼", 1⅜" and 1½" tubing. Length, 3⅛". Weight, .86 Lb.



PLUMBING TOOLS

PROTO TOOLS
PROfessional QUALITY TOols



For half a century Proto has made the best possible plumbing tools at the best possible price. Yarning irons are slightly offset for clearance. Long calkers, for calking lead in hub of soil pipe, are ground both inside and out, and their concave blades fit 4″ pipe. Water main calkers are ground square, have an offset handle for knuckle clearance, and do a fast job of calking joints. Left and right calkers are for use near walls and in corners.

SPRING YARNING IRONS

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
6 ½ x 12	19/32″	1/16″	5/8″	6 ½″	12″	.45
6 5/8 x 12 ½	19/32″	1/8″	3/4″	7″	12 ½″	.64
6 5/8 x 18	19/32″	3/32″	3/4″	13″	18″	.80

OFFSET YARNING IRONS

14 ½ x 12 ½	19/32″	1/16″	5/8″	6 3/4″	12 ½″	.52
14 5/8 x 13	19/32″	3/32″	11/16″	7 1/4″	13″	.79
14 5/8 x 19	19/32″	3/32″	11/16″	12 3/4″	19″	.99
14 3/4 x 15	23/32″	3/32″	3/4″	9 ½″	15″	1.18

CURVED PONY CALKERS (Inside & Outside)

21 ½ In	½″	1/8″	3/4″	1 1/4″	3″	.13
21 ½ Out	½″	1/8″	3/4″	1 1/4″	3″	.13

LONG CALKERS (Inside & Outside)

33 ½ In	½″	1/8″	3/4″	1 ½″	6 ½″	.32
33 ½ Out	½″	1/8″	3/4″	1 ½″	6 ½″	.32
33 5/8 In	19/32″	5/32″	7/8″	1 3/4″	7″	.52
33 5/8 Out	19/32″	5/32″	7/8″	1 3/4″	7″	.52

OFFSET CALKERS (Inside & Outside)

033 ½ In	½″	1/8″	3/4″	1 ½″	6 ½″	.33
033 ½ Out	½″	1/8″	3/4″	1 ½″	6 ½″	.33
033 5/8 In	19/32″	1/8″	7/8″	1 5/8″	7″	.57
033 5/8 Out	19/32″	1/8″	7/8″	1 5/8″	7″	.57

WATER MAIN CALKERS

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
107 3/8	13/16″	3/8″	1″	1 7/16″	8″	1.01
107 ½	13/16″	½″	1″	2 5/16″	8″	1.04
109	23/32″	3/16″	1″	2 11/16″	8″	.83

BROAD CURVED NOSE CALKING IRON

110	19/32″	1/8″	1 ½″	2″	8 ½″	.71

CEILING CALKER

130	19/32″	5/32″	11/16″	1 5/8″	10″	1.20

LONG GASKET CALKERS

131 5/8	19/32″	5/32″	7/8″	4″	9 ½″	.67
131 3/4	23/32″	3/16″	1″	4 1/4″	9 ½″	.98

LEFT AND RIGHT CALKERS

132L	19/32″	5/32″	7/8″	1 5/8″	8 7/8″	.87
132R	19/32″	5/32″	7/8″	1 5/8″	8 7/8″	.87

INTERNAL PIPE WRENCHES

Screw mandrel to force gripping dogs equally against interior of broken pipe or close nipples, etc. Then turn with wrench. No hammering to release.

No. 140A—Set of all 3 wrenches in plastic kit. Weight, 1.44 Lbs.

NO.	PIPE SIZE	OVERALL LENGTH	WT., LBS.	SPARE SET OF 3 JAWS NO.	SPARE SCREW NO.
140	½″	3 ½″	.30	140J	140S
141	¾″	3 ¾″	.51	141J	141S
142	1″	4″	.57	142J	142S

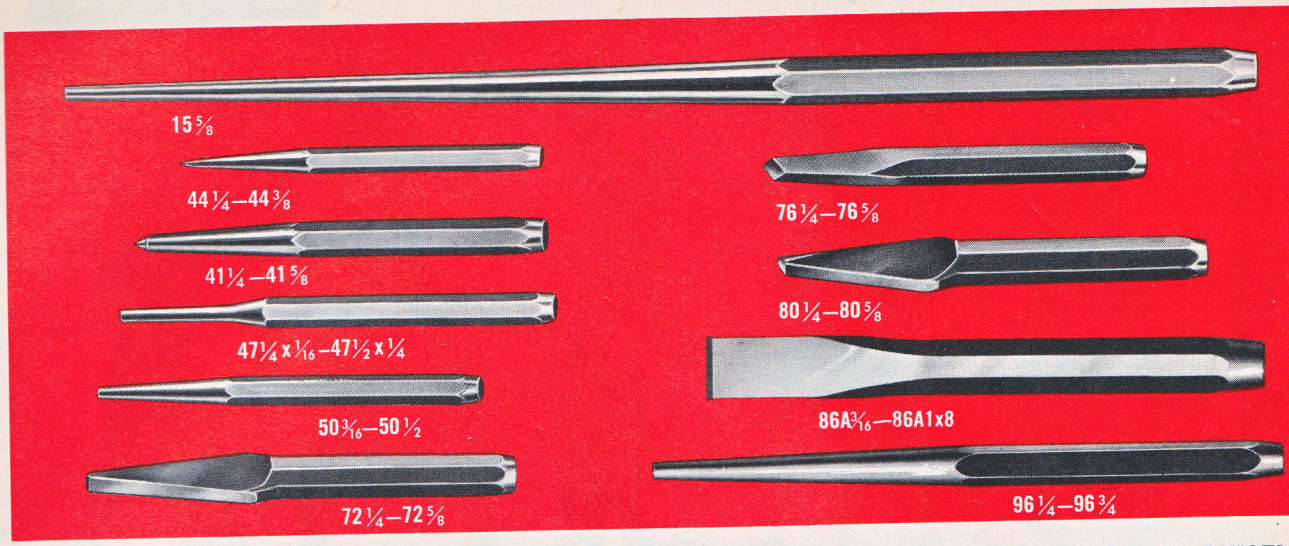
140A

140

For 9500 series screw and pipe extractors See page 57.

PUNCHES AND CHISELS

For Federal Specs. see "Proto Conversion to Federal stock numbers" Bulletin No. 5918



Made of fine alloy steel, heat treated and tempered for long life, well balanced and easy to handle. (Proto tools made over fifty years ago can still be found in mechanics' kits, hard and tough, still doing the job for which they were made.)

ALIGNING PUNCH

NO.	POINT	STOCK	LGTH.	WT., LBS.
15 5/8	3/16"	19/32" Hex.	16"	.98

CENTER PUNCHES

41 1/4	...	1/4" Hex.	4 1/4"	.05
41 5/16	...	5/16" Hex.	4 5/8"	.09
41 3/8	...	3/8" Hex.	4 7/8"	.13
41 7/16	...	7/16" Hex.	5 1/4"	.19
41 1/2	...	1/2" Hex.	5 5/8"	.26
41 5/8	...	19/32" Hex.	6 1/4"	.44

PRICK PUNCHES

44 1/4	...	1/4" Hex.	4 3/4"	.05
44 5/16	...	5/16" Hex.	5"	.09
44 3/8	...	3/8" Hex.	5 1/4"	.13

RIVET OR PIN PUNCHES

47 1/4 x 1/16	1/16"	1/4" Hex.	4 3/8"	.05
47 1/4 x 3/32	3/32"	1/4" Hex.	4 3/4"	.05
47 5/16 x 1/8	1/8"	5/16" Hex.	5 1/4"	.09
47 5/16 x 5/32	5/32"	5/16" Hex.	5 5/8"	.10
47 3/8 x 3/16	3/16"	3/8" Hex.	6 1/8"	.15
47 7/16 x 7/32	7/32"	7/16" Hex.	6 1/2"	.20
47 1/2 x 1/4	1/4"	1/2" Hex.	6 3/4"	.30

STARTING PUNCHES

NO.	POINT	STOCK	LGTH.	WT., LBS.
50 3/16	1/16"	3/16" Hex.	4 1/4"	.03
50 1/4	3/32"	1/4" Hex.	5 5/8"	.05
50 5/16	1/8"	5/16" Hex.	5"	.10
50 3/8	3/16"	3/8" Hex.	5 5/8"	.15
50 7/16	7/32"	7/16" Hex.	6"	.23
50 1/2	1/4"	1/2" Hex.	6 1/2"	.31

CAPE CHISELS

NO.	CUT	STOCK	LGTH.	WT., LBS.
72 1/4	11/64"	1/4" Hex.	4 5/8"	.05
72 5/16	13/64"	5/16" Hex.	5 1/8"	.09
72 3/8	17/64"	3/8" Hex.	5 5/8"	.15
72 1/2	21/64"	1/2" Hex.	6 3/16"	.27
72 5/8	3/8"	19/32" Hex.	6 1/2"	.46

DIAMOND POINT CHISELS

76 1/4	5/32"	1/4" Hex.	4 5/8"	.06
76 5/16	3/16"	5/16" Hex.	5 1/8"	.10
76 3/8"	1/4"	3/8" Hex.	5 5/8"	.15
76 1/2	5/16"	1/2" Hex.	6 1/8"	.28
76 5/8	3/8"	19/32" Hex.	6 1/2"	.48

HALF RND-NOSE CAPE CHISELS

NO.	CUT	STOCK	LGTH.	WT., LBS.
80 1/4	11/64"	1/4" Hex.	4 5/8"	.06
80 5/16	13/64"	5/16" Hex.	5 1/8"	.10
80 3/8	17/64"	3/8" Hex.	5 5/8"	.15
80 5/8	3/8"	19/32" Hex.	6 1/2"	.49

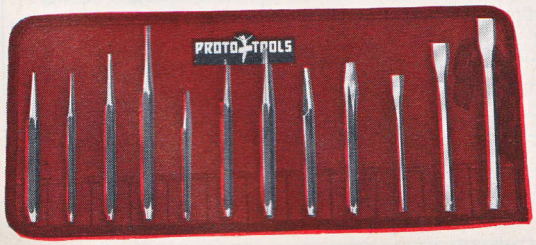
COLD CHISELS

86A3/16	1/4"	3/16" Hex.	4 5/8"	.03
86A1/4	5/16"	1/4" Hex.	5 1/8"	.06
86A5/16	3/8"	5/16" Hex.	5 3/8"	.10
86A3/8	7/16"	3/8" Hex.	5 5/8"	.17
86A7/16	1/2"	7/16" Hex.	6 1/4"	.24
86A1/2	5/8"	1/2" Hex.	6 5/8"	.35
86A5/8	3/4"	19/32" Hex.	7 1/4"	.57
86A3/4 x 8	7/8"	23/32" Hex.	8"	.92
86A3/4 x 12	7/8"	23/32" Hex.	12"	1.44
86A7/8 x 8	1"	13/16" Hex.	8"	1.26
86A7/8 x 12	1"	13/16" Hex.	12"	1.94
86A1 x 8	1 3/16"	15/16" Hex.	8"	1.64

LONG TAPER DRIFT PUNCHES

NO.	POINT	STOCK	LGTH.	WT., LBS.
96 1/4	3/32"	1/4" Hex.	10 1/8"	.11
96 5/16	1/8"	5/16" Hex.	10 1/8"	.18
96 3/8	3/16"	3/8" Hex.	10 1/8"	.27
96 7/16	7/32"	7/16" Hex.	10 3/16"	.35
96 1/2	1/4"	1/2" Hex.	10 3/16"	.46
96 5/8	5/16"	19/32" Hex.	10 3/16"	.73
96 3/4	3/8"	23/32" Hex.	10 1/4"	1.02

PUNCH AND CHISEL SETS

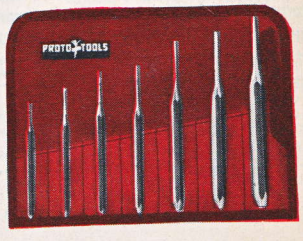


NO. 2 SET

A fine selection, providing the twelve punches and chisels used most frequently in practically all types of work. Includes Center Punch 41 3/8; Rivet or Pin Punches 47 1/4 x 3/32, 47 5/16 x 1/8 and 47 3/8 x 3/16; Starting Punches 50 3/16, 50 5/16 and 50 3/8; Cape Chisel 72 5/16; Diamond Point Chisel 76 5/16, and Cold Chisels 86A1/4, 86A3/8 and 86A7/16 in a red Vinyl Kit No. 2402. Weight, 1.55 Lbs.

NO. 3 SET

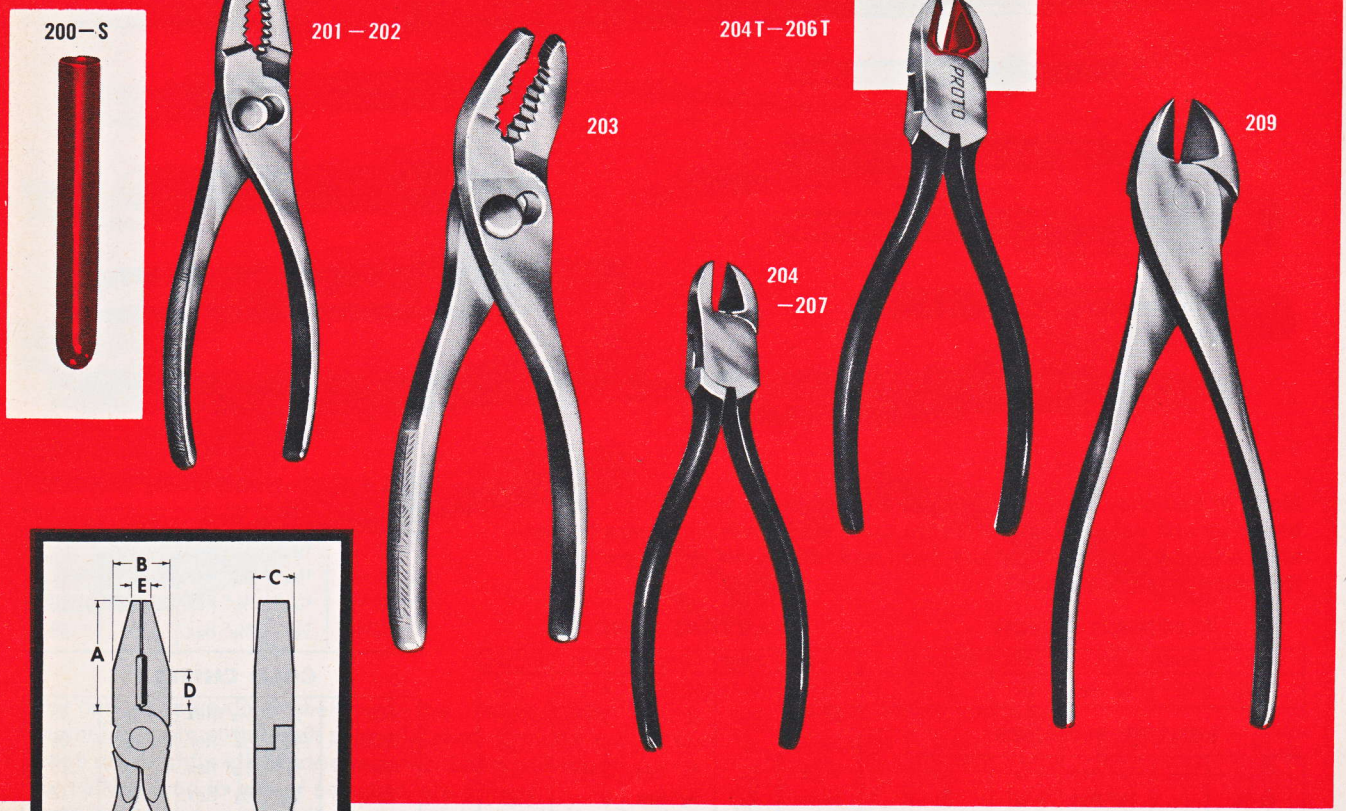
A useful set, including Center Punch 41 3/8; Rivet or Pin Punches 47 5/16 x 1/8 and 47 3/8 x 3/16; Starting Punch 50 5/16, and Cold Chisel 86A1/2 in Vinyl Kit No. 2411. Weight, .95 Lb.



NO. 47A SET

A handy master set of rivet or pin punches with all of the sizes available. Includes 47 1/4 x 1/16, 47 1/4 x 3/32, 47 5/16 x 1/8, 47 5/16 x 5/32, 47 3/8 x 3/16, 47 7/16 x 7/32 and 47 1/2 x 1/4 in red Vinyl Kit No. 2403. Weight, 1.10 Lbs.

PLIERS



Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)

(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.)

You will find the right pliers for every job among the many types and sizes in the Proto line. And the highest quality. Skilled workmen with modern equipment forge and machine these pliers to highest standards. Long life is insured by their sturdy construction and high grade steels. They are easy to work, have good balance and "feel," correct leverage. Gripping teeth are properly shaped. Sharp cutting edges are perfectly matched and built for hard use. Handles are shaped for comfortable, sure grip. These superior features are the result of many years' experience in plier design.

"HANDEZE"* PLASTIC GRIPS FOR TOOL HANDLES

Red vinyl plastisol grips enhance appearance, increase gripping power and reduce muscle fatigue. They slip on easily, fit tight, wear long, and are replaceable. Many pliers are available with factory-fitted "Handeze" grips.

†NO.	SIZE	FIT PLIERS	INSIDE DIAM.	LENGTH	WEIGHT
200S	Small	4″ to 6″	¼″	3″	.02 Lb.
200M	Medium	6″ to 8″	5⁄16″	4″	.04 Lb.
200L	Large	8″ to 12″	⅜″	5″	.05 Lb.

† Covers Pair of Grips, Individually Packed by Pairs.
* See No. 299 Plier for Grip Installation.

NOS. 201 & 202 THIN NOSE SLIP JOINT PLIERS

Designed with a slim nose to reach into tight places. Have two jaw-opening adjustments and shear-type wire cutter. Two sizes. Chromed.

NO.	LENGTH	WEIGHT	BOLT NO.	NUT NO.	A	B	C
201	5 ½″	.26 Lb.	240-B	240-N	29⁄32″	1 1⁄16″	11⁄64″
202	6 ½″	.35 Lb.	202-B	240-N	1 15⁄64″	1 1⁄16″	13⁄64″

NO. 203 THIN BENT NOSE SLIP JOINT PLIER

Made with 30° offset thin nose which reaches into many places inaccessible with straight nose pliers. Has two jaw-opening adjustments and wire cutter of shear type. Chromed.

NO.	LENGTH	WEIGHT	BOLT NO.	NUT NO.	A	B	C
203	6 ¾″	.43 Lb.	202-B	240-N	1 5⁄16″	1 ¼″	13⁄64″

NOS. 204, 205, 206, 207 DIAGONAL CUTTING PLIERS

Thin, narrow jaws work easily in congested places. Useful for switchboard, telephone, ignition, electronic and electrical work. Induction-hardened cutting edges. High quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C
204	4 ½″	.16 Lb.	23⁄32″	9⁄16″	11⁄32″
204SG	4 ½″	.18 Lb.	23⁄32″	9⁄16″	11⁄32″
204SGT	4 ½″	.18 Lb.	23⁄32″	9⁄16″	11⁄32″
204T	4 ½″	.16 Lb.	23⁄32″	9⁄16″	11⁄32″
205	5″	.21 Lb.	¾″	⅝″	⅜″
205SG	5″	.24 Lb.	¾″	⅝″	⅜″
205SGT	5″	.26 Lb.	¾″	⅝″	⅜″
206	6″	.34 Lb.	27⁄32″	49⁄64″	7⁄16″
206G	6″	.40 Lb.	27⁄32″	49⁄64″	7⁄16″
206T	6″	.31 Lb.	27⁄32″	49⁄64″	7⁄16″
207	7 ½″	.45 Lb.	1 1⁄16″	15⁄16″	29⁄64″
207G	7 ½″	.50 Lb.	1 1⁄16″	15⁄16″	29⁄64″

G —Fitted with "Handeze" Plastic Grips.
T —Red plastic "Snip-Grip" inserts on cutting edges hold wire ends, prevent shorts, machine failures, eye injury.
S —Has Coil spring. Won't pinch fingers.

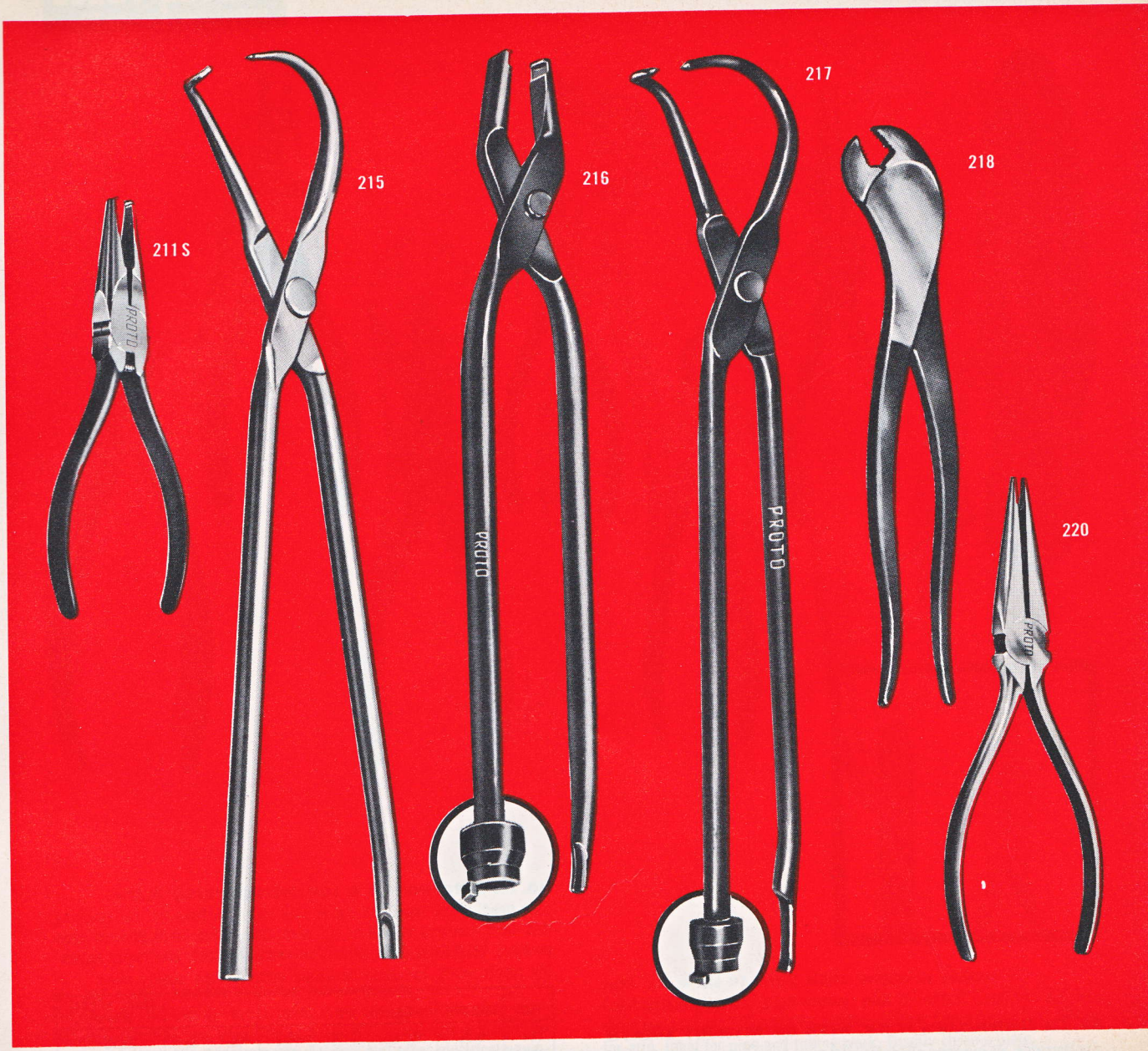
NO. 209 HEAVY-DUTY DIAGONAL CUTTING PLIER

Powerful cutter, with joint close to short jaws for great leverage. Cuts heavy wire with little effort. Induction-hardened. High quality alloy.

NO.	LENGTH	WEIGHT	A	B	C
209	7″	.47 Lb.	25⁄32″	1 3⁄16″	29⁄64″
209G	7″	.60 Lb.	25⁄32″	1 3⁄16″	29⁄64″

G —With "Handeze" Plastic Grips.

PLIERS



Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)

(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.)

NO. 211S TRANSVERSE CUTTING PLIER WITH SPRING

A precision electronic plier. Gets into those places inaccessible to most conventional diagonal pliers, for quick, clean cuts. Induction-hardened cutting edges. High quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C
211S	5 ½″	.25 Lb.	1 15/32″	21/32″	25/64″

NO. 215 BRAKE SPRING PLIER

Curved jaw clears edge of brake shoe to bring it in close adjustment with center line of spring. Thin hooked jaw slips easily under spring. A necessary plier for auto mechanics. Tough, high quality alloy.

215	12 ½″	.61 Lb.			

NO. 216 BENDIX BRAKE PLIER

Three tools in one! Speeds and simplifies Bendix brake repairs. Special jaws remove hold down cups. Replaceable Bendix Socket on one handle fits over anchor pin and lug lifts off anchor springs. Other handle end has shovel for replacing anchor pin springs. Tough, high quality alloy.

NO. 217 ALL-PURPOSE BRAKE PLIER

Combines jaws of No. 215 Brake Spring Plier and handle end features of No. 216 Bendix Brake Plier.

NO.	LENGTH	WEIGHT	REPLACEABLE BENDIX SOCKET NO.	BENDIX BRAKE TOOL NO.
216	11 ⅛″	.62 Lb.	2005S	
217	12 ¾″	.78 Lb.	2005S	200-S

NO. 218 ANGLE NOSE BATTERY PLIER

Thin jaws at 30° angle make terminal nuts easily accessible. No matter what condition the nuts or bolts are in from corrosion or tool damage, the gripping jaws take a sure hold.

NO.	LENGTH	WEIGHT	A	B	C	E
218	8″	.43 Lb.	19/32″	1 3/16″	5/16″	
218G	8″	.53 Lb.	19/32″	1 3/16″	5/16″	

G—With "Handeze" Plastic Grips.

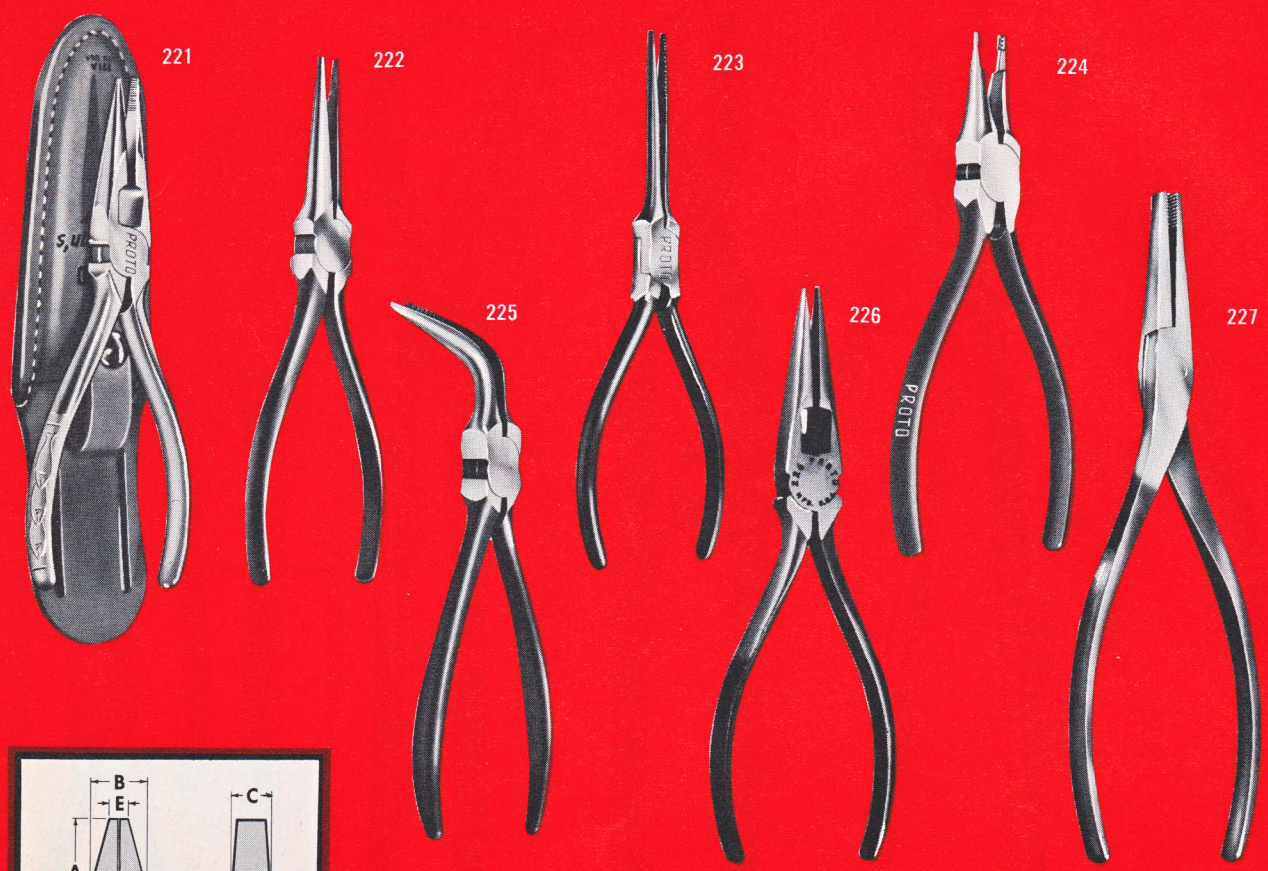
NO. 220 LONG CHAIN NOSE PLIER

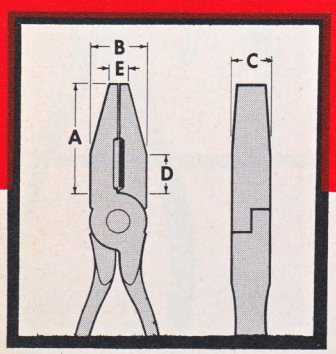
Diamond-serrated jaws and long, slim nose make loops and bends in tight places. Absence of side cutter prevents cutting by mistake. Handy for various types of electrical work. Tough, high quality alloy.

220	6 5/8″	.30 Lb.	1 ⅞″	11/16″	25/64″	3/32″
220G	6 ½″	.34 Lb.	1 ⅞″	11/16″	25/64″	3/32″

G—With "Handeze" Plastic Grips.

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS





Federal Specs.: GGG-P-471c. (Pliers)

GGG-N-350a. (Nippers and Pincers)

(For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.)

NO. 221 FISHERMAN'S PLIER, WITH OR WITHOUT SHEATH

Sportsman's all-purpose plier. Needle nose jaws extract hooks, attach sinkers, cut leaders, tie flies, skin fish, repair reels, fix outboard motors. Heavy chrome plate. Fish knurl handles give sure grip. Belt-type, saddle leather, gold embossed sheath. Strap with snap button. Induction-hardened. High quality alloy. Makes perfect gift.

NO.	LENGTH	WEIGHT	A	B	C	D	E
221	6 23/32"	.29 Lb.	1 31/32"	11/16"	25/64"	15/32"	3/32"
221-A		.35 Lb.					
221-S		.06 Lb.					

A—Plier with Sheath.....S–Sheath only.

NO. 222 LONG NEEDLE NOSE PLIER

Has very thin nose for getting into places with restricted clearance. Needed for many jobs but especially useful for television, radio and all types of electronics work. High quality alloy steel.

222	6 1/8"	.28 Lb.	2 3/32"	11/16"	25/64"	— —	3/32"
222G	6 3/4"	.32 Lb.					

G—With "Handeze" Plastic Grips.

NO. 223 LONG THIN NEEDLE NOSE PLIER

Extra slim-nosed electronic plier for gripping, looping and twisting wire and for light, confined precision work. High quality alloy steel.

223	6"	.13 Lb.	2 9/32"	15/32"	5/16"	— —	3/32"

NO. 224 ELECTRONICS & IGNITION CUTTING PLIER

Slim needle nose type with cutter only 3/16" back from tip. For reaching into close quarters to pull or cut wire. Coil spring holds plier in open position. Used for ignition, television, radio and other electronics assembly repair work. Induction-hardened cutters. High quality alloy.

NO.	LENGTH	WEIGHT	A	B	C	D	SPARE HANDLE SPRING
224	6 1/8"	.28 Lb.	1 3/8"	43/64"	25/64"	1/4"	285S-S
224G		.32 Lb.	1 3/8"	43/64"	25/64"	1/4"	285S-S

G—Fitted with "Handeze" Plastic Grips.

NO. 225 CURVED THIN NEEDLE NOSE PLIER

Same as No. 222 plier, except nose is bent at 78° angle. For reaching around obstructions.

NO.	LENGTH	WEIGHT	A	B	C	D	E
225	6"	.28 Lb.	1 1/4"	11/16"	25/64"	— —	3/32"
225G	6"	.32 Lb.	1 1/4"	11/16"	25/64"		3/32"

G—With "Handeze" Plastic Grips.

NO. 226 NEEDLE NOSE SIDE CUTTING PLIER

The long nose, strong, extra sharp induction-hardened cutters make an ideal combination for electronic, telephone and other electrical work. A good long-reach plier for many types of jobs. High quality alloy.

226	6 23/32"	.29 Lb.	1 31/32"	11/16"	25/64"	15/32"	3/32"
226G	6 3/4"	.40 Lb.	1 31/32"	11/16"	25/64"	15/32"	3/32"

G—With "Handeze" Plastic Grips.

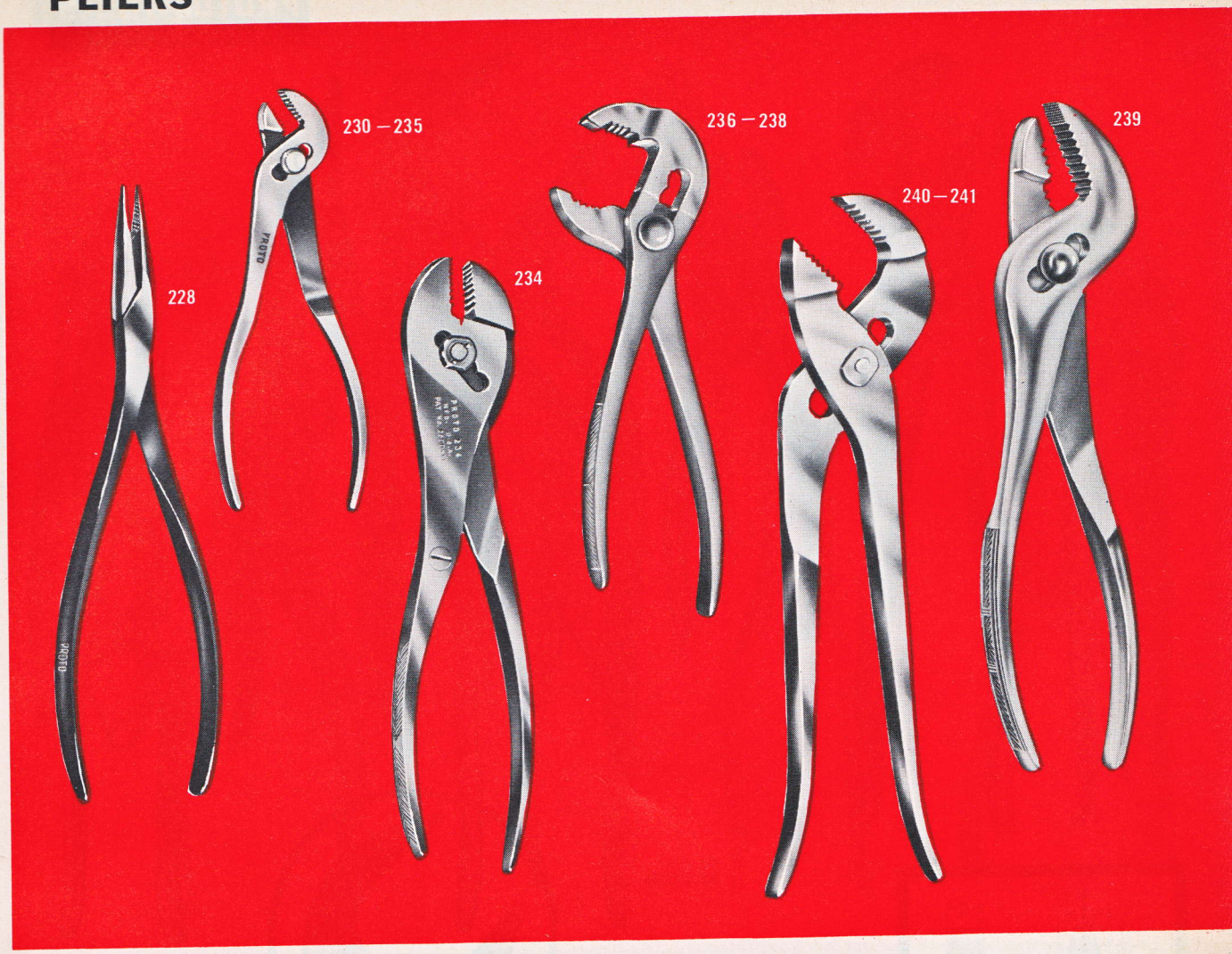
NO. 227 DUCKBILL PLIER

A useful plier for carburetor, radio, refrigerator, TV, office machine and many other types of work. Long handles provide powerful leverage. Jaws have versatile diamond knurled teeth for positive gripping.

227	7 3/4"	.37 Lb.	1 3/8"	9/16"	7/16"	— —	1/8"
227G	7 3/4"	.46 Lb.	1 3/8"	9/16"	7/16"		1/8"

G—With "Handeze" Plastic Grips

PLIERS



Federal Specs.: GGG-P-471c. (Pliers). GGG-N-350a. (Nippers and Pincers). For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.

No. 228 LONG REACH NEEDLE NOSE PLIER

For drawing and looping wire, forming terminals, working in close quarters, and reaching way back into assemblies. Extra length is useful for repair and assembly of instruments, TV sets and other electrical equipment. Diamond knurled teeth permit pulling or side holding, grip, 1 3/8".

NO.	LENGTH	WEIGHT	A	B	C	D	E
228	7 3/4"	.37 Lb.	1 3/8"	9/16"	7/16"	— —	5/64"
228G	7 3/4"	.51 Lb.	1 3/8"	9/16"	7/16"		5/64"

NOS. 230 & 235, MIDGET SLIP JOINT IGNITION PLIERS

Light and convenient to use. Designed for ignition work or other jobs requiring narrow jaws. Has three jaw opening adjustments. Protected from rust by Parco-Lubrite finish, (No. 230) or Chrome Plating (No. 235).

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
230	4 1/2"	.09 Lb.	7/16"	29/32"	3/16"	235-B & 235-N
235	4 1/2"	.09 Lb.	7/16"	29/32"	3/16"	235-B & 235-N

No. 234 "MULTI-PLIER"

"A chest of tools in one," this revolutionary plier is perfect for countless jobs, and is a "must" for all tool users. Patented, three-piece compound-leverage design multiplies applied pressure ten times! Non-slip jaws open to 1 1/4". Unique diagonal four-position slot gives closer, easier jaw adjustments, reduces wedge action and wear. Alloy steel. Chromed.

NO.	LENGTH	WEIGHT	A	B	C	SPARE SCREW AND NUT NO.
234	7 3/4"	.63 Lb.	13/16"	1 3/8"	7/16"	234-P Screw 240-N Nut

NOS. 236 & 238 PARROT NOSE WRENCH PLIERS

Combination plier and pipe wrench, with 75° offset nose. No. 236 has three jaw-opening adjustments and No. 238 has four adjustments. Noted for grip. Ideal for pipe and tubing work. Quality chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
236	6 1/4"	.42 Lb.	1 1/16"	2 1/16"	25/64"	202-B & 240-N
238	7 1/4"	.59 Lb.	1 1/8"	2 3/16"	7/16"	257-B & 240-N

NO. 239 WRENCH PLIER

A popular type, with long slim 20° offset nose and three jaw-opening adjustments. Jaws hold objects in front of center, giving a powerful gripping action. Quality chrome plate.

239	8"	.56 Lb.	1 3/16"	2 3/16"	25/64"	202-B & 240-N

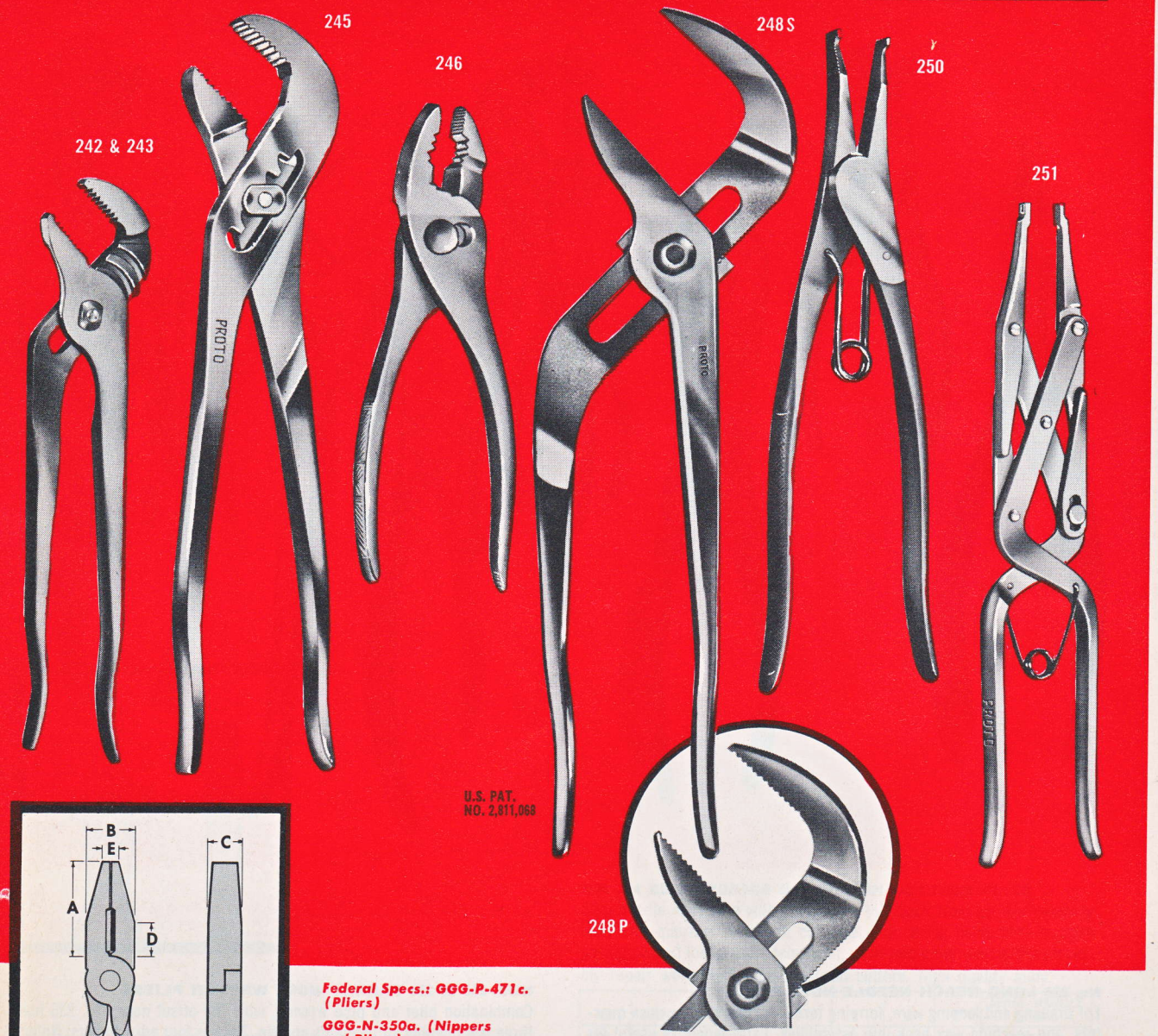
NOS. 240 & 241 GENERAL UTILITY PLIERS

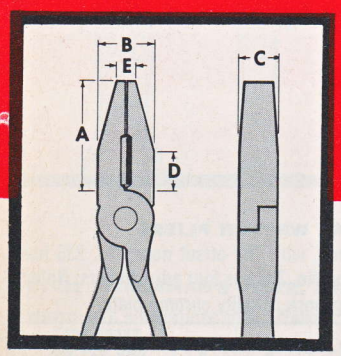
All-purpose pliers, with five jaw-opening adjustments. Teeth are shaped as in a pipe wrench, insuring positive grip on round objects. Chromed.

NO.	TYPE DUTY	LENGTH	WEIGHT	A	B	C	SPARE BOLT AND NUT NO.
240	Heavy	9"	.57 Lb.	1 3/32"	2 1/32"	11/32"	240-B & 240-N
241	Light	9 1/2"	.57 Lb.	1 3/32"	2 1/16"	9/32"	241-B & 240-N

G—With "Handeze" Plastic Grips.

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS





Federal Specs.: GGG-P-471c. (Pliers)

GGG-N-350a. (Nippers and Pliers)

(For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.)

NOS. 242 & 243 POWER TRACK® PLIER

A curved tongue-and-groove joint holds jaws securely in any desired position and takes strain off bolt. Five grooves provide wide opening range for handling hundreds of jobs. Quality chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT & NUT NOS.
242	7 ½"	.45 Lb.	31/32"	1 25/32"	29/64"	243-B & 243-N
243	10"	.75 Lb.	1 3/16"	2 5/32"	29/64"	243-B & 243-N

NO. 245 SELF-ENERGIZING GEAR-LOCK PLIER

A squeeze of the handles locks bolt in gear-type slot and jaw pressure increases. No binding or slipping. Slim jaws, 1 ¾" opening. Sharp pipe wrench teeth and powerful no-bend cutter. A revolutionary multi-purpose tool. Quality chrome plate.

245	9 ½"	.75 Lb.	1 1/8"	2 3/16"	7/16"	245-B & 243-N

NO. 246 COMB. SLIP JOINT CUTTING PLIER

A well-made plier that cuts most wire and nails easily. Two jaw-opening adjustments. Quality chrome plate.

246	6 ½"	.46 Lb.	1 19/64"	1 ¼"	7/16"	257-B & 240-N

NO. 248 SMOOTH JAW PLIER. NO. 248P PIPE JAW PLIER

Another sensational plier—with smooth jaws for protecting soft metal and decorative finish nuts from damage or with milled pipe jaws. A novel gear rack, with teeth 1/16" apart, permits 40 parallel jaw positions for securing maximum bearing surface on basin and other nuts up to 2 7/8". Cam pulls sliding wedge against teeth in rack, squeezing the extra long handles creates locking action.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT & NUT NOS.
248S	11 ¼"	.92 Lb.	1 7/8"	2 27/32"	23/64"	248S-B & 243-N
248P	11 ¼"	.97 Lb.	1 7/8"	2 27/32"	23/64"	248S-B & 243-N

NO. 250 LOCK RING & "HORSESHOE" WASHER PLIER

A money-saving dual-purpose plier, for spreading both soft iron "horse-shoe" lock washers used on brakes and tempered steel lock rings used on shafting to locate bearings, gears, etc.

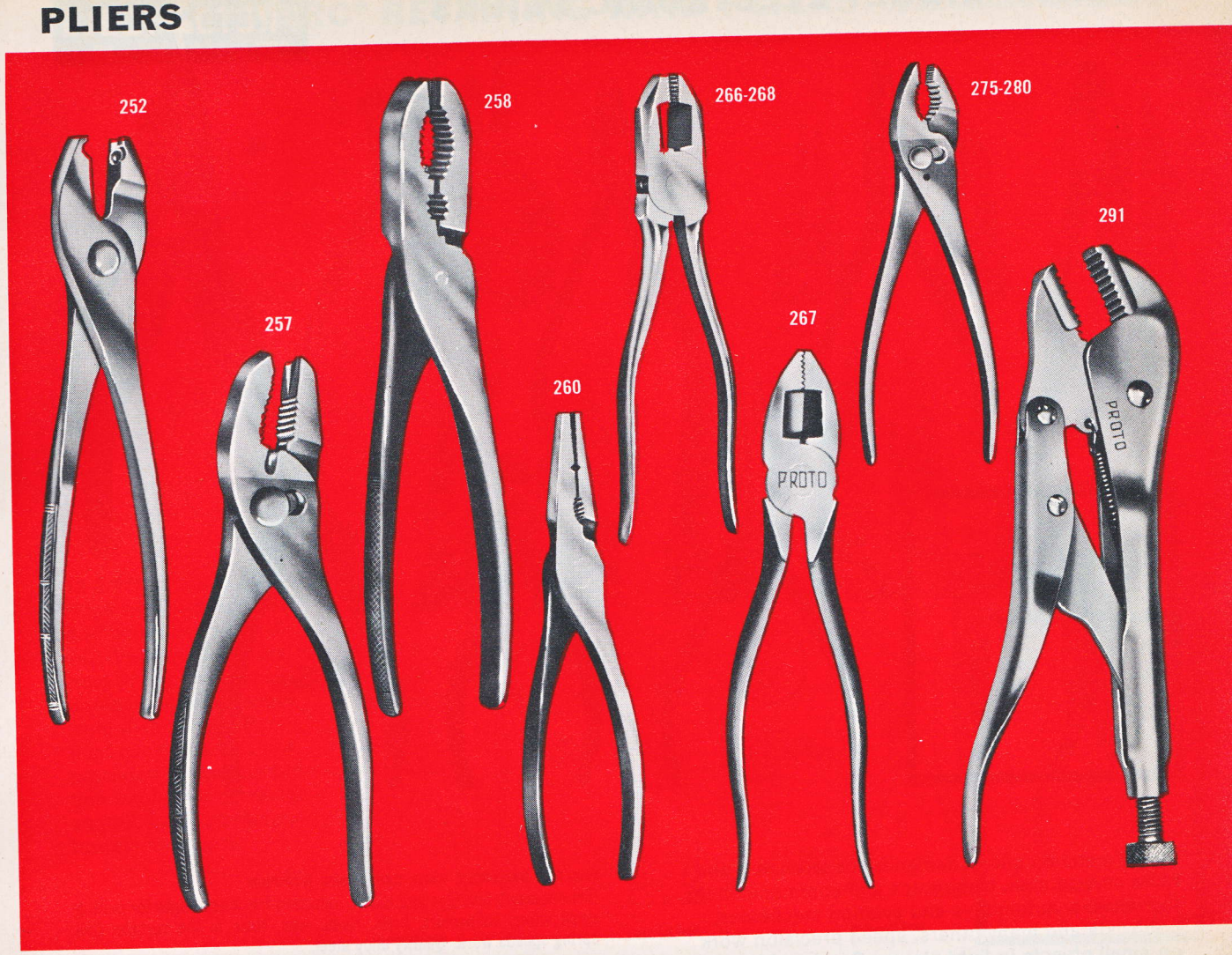
NO.	LENGTH	WEIGHT	A	B	C	SPARE SPRING NO.
250	8 ¼"	.40 Lb.	2 7/64"	27/32"	3/8"	250-S

NO. 251 PARALLEL JAW LOCK RING PLIER

Powerful compound leverage simplifies removal of lock or snap rings used on shafts to retain bearings. Jaw tip indentations hold two ends of ring, prevents breakage. Outside Jaw Spread 1 ¼". Chromed.

251	9 ½"	.54 Lb.	3/16"	11/64"	3/16"	251-S

PLIERS



Federal Specs.: GGG-P-471c. (Pliers). GGG-N-350a. (Nippers and Pincers). For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.

NO. 252 CORBIN HOSE CLAMP PLIER

For installation and repair of Corbin spring tension clamps, used on hose connections for car water pumps and heaters. For appliances and other equipment using Corbin clamps. Two gripping positions engage ears, prevent hazard of clamp flying out of the plier. Chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	D	SPARE BOLT & NUT NOS.
252	7 ¾″	.50 Lb.	1 1⁄16″	1 5⁄16″	25⁄64″		202-B & 240-N

NO. 257 HEAVY-DUTY UNIVERSAL PLIER

A curved jaw grips objects of almost any shape. Other jaw is grooved for gripping wire, etc. Has a shear-type wire cutter and two-jaw-opening adjustments. Chrome plate.

257	7″	.55 Lb.	1 ¼″	1 5⁄16″	7⁄16″		257-B & 240-N

NO. 258 GAS PLIER

Handles many sizes of studs, tubing and pipe. Jaws have two different sizes of concave openings—for either small or large diameter objects. Jaw ends have lengthwise tube-gripping teeth.

258	8 ¼″	.63 Lb.	2 3⁄32″	1 5⁄32″	27⁄64″		

NO. 260 LONG THIN NOSE TELEPHONE PLIER

Popular for telephone work, radio installation and repair. Long thin nose for tight places. Shear-type wire cutter and stripper.

260	6 ¼″	.24 Lb.	1 17⁄32″	⅞″	21⁄64″		
260G	6 ¼″	.29 Lb.					

G—with "Handeze" Plastic Grips.

NOTE: For spare parts see page 75

NOS. 266 & 268 LINEMAN'S SIDE CUTTING PLIERS

For utility linemen's work, wiring and electrical equipment installation and maintenance. Carefully matched induction-hardened cutting edges. Useful around filling stations, garages. High quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C	D
266	6 ½″	.40 Lb.	1 1⁄16″	27⁄32″	7⁄16″	5⁄8″
266G	6 ½″	.50 Lb.	1 1⁄16″	27⁄32″	7⁄16″	5⁄8″
268	8 ½″	.82 Lb.	1 7⁄16″	1 15⁄64″	5⁄8″	23⁄32″
268G	8 ½″	.91 Lb.	1 7⁄16″	1 15⁄64″	5⁄8″	23⁄32″

G—with "Handeze" Plastic Grips.

NO. 267 NEW ENGLAND STYLE LINEMAN'S PLIER

Heavy-duty type, powerful cutters. Slim-nosed for greater accessibility to restricted spaces. Induction hardened. Handles are comfortably shaped. Quality Alloy.

267	7 ¼″	.59 Lb.	1 5⁄16″	1 ⅛″	½″	43⁄64″

NOS. 275 - 276 - 278 - 280 SLIP JOINT PLIERS

Leaders for general utility, design and service. Have two jaw-opening adjustments and a shear-type wire cutter. Four sizes. Chrome plate.

NO.	LENGTH	WEIGHT	A	B	C	SPARE BOLT NOS.	SPARE NUT NOS.
275	5 ½″	.26 Lb.	1 1⁄16″	1 1⁄16″	11⁄32″	240-B	240-N
276	6 ½″	.36 Lb.	29⁄32″	1 ⅛″	13⁄32″	202-B	240-N
278	8″	.49 Lb.	1 9⁄64″	1 3⁄16″	13⁄32″	202-B	240-N
280	10″	.89 Lb.	1 25⁄64″	1 7⁄16″	½″	280-B	280-N

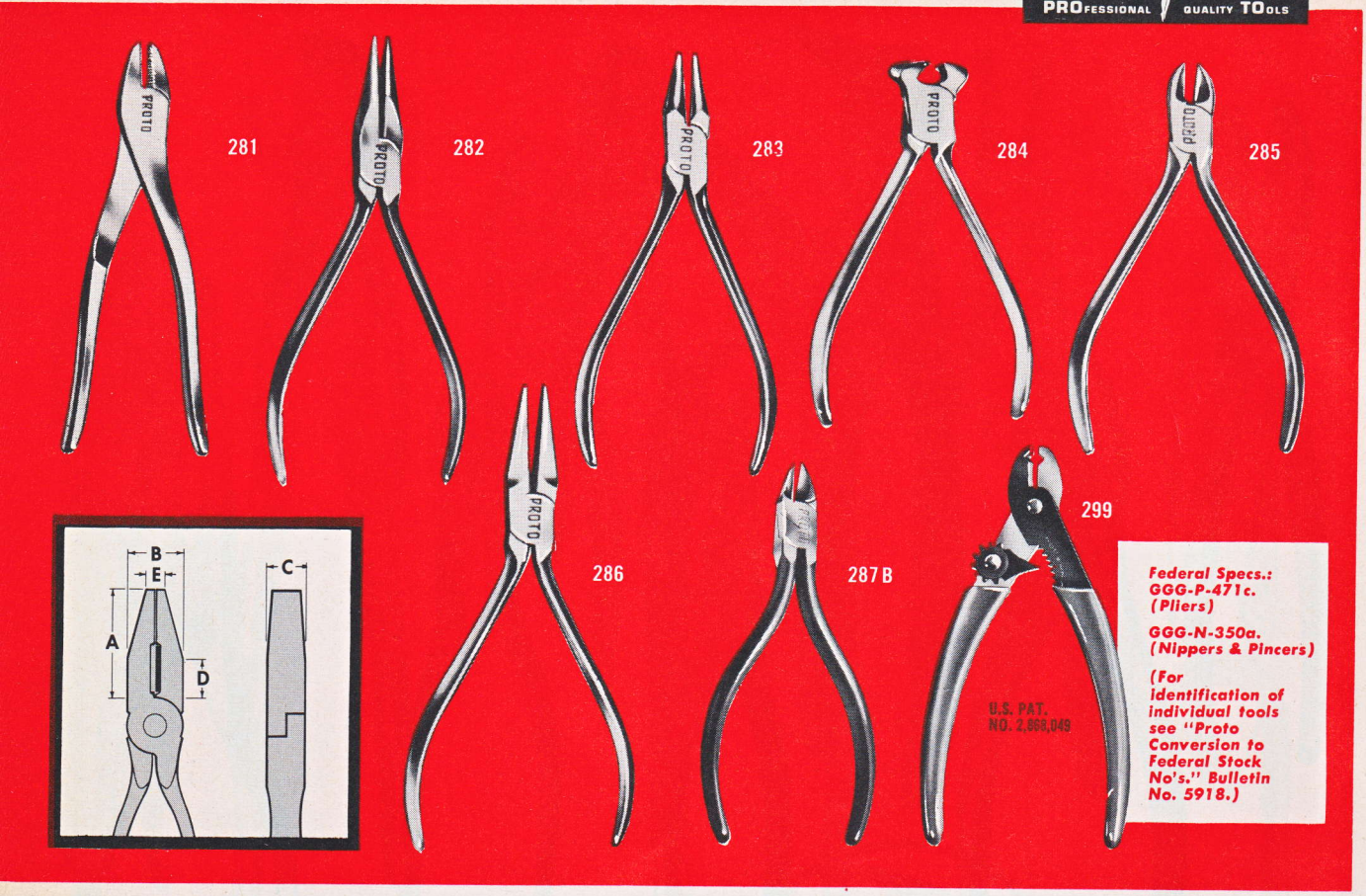
NO. 291 LEVER WRENCH PLIER

Four tools in one—a powerful hand vise, clamp, pipe wrench and plier. Lever action locks jaws in holding position with pressure up to 1 ton. Compact design, capacity of 1 ½″. Chrome plate.

NO	CAPACITY	LENGTH	WEIGHT
291	1 ½″	8″	.94 Lb.

MIGHTY MIDGET ELECTRONIC PLIERS

PROTO TOOLS
PROfessional QUALITY TOols



Federal Specs.: GGG-P-471c. (Pliers)

GGG-N-350a. (Nippers & Pincers)

(For identification of individual tools see "Proto Conversion to Federal Stock No's." Bulletin No. 5918.)

These matched pliers, designed for television and radio service men, electronics and communications technicians, automotive and aviation mechanics, hobbyists and many others, speed precision work on small objects in tight places. Comfortable, wide-opening handles provide high leverage, fit snugly into the hand, and have good "feel."

- **B** indicates Parco-Lubrite Finish.
- **P** indicates Full Polish—as shown above without "P" suffix.
- **G** indicates "Handeze" Plastic Grips.
- **S** indicates Coil Spring.

More than one letter indicates combination.

NO. 281 MIDGET STRAIGHT NOSE PLIER

Slim, tapered jaws reach into narrow places. Sharp milled teeth assure good grip on smallest objects.

NO.	LENGTH	WEIGHT	A	B	C	D
281B / 281P	4 ½″	.09 Lb.	17/32″	9/16″	3/16″	
281G	4 ½″		17/32″	9/16″	3/16″	

NO. 282 MIDGET CHAIN NOSE PLIER

Narrow tapered jaws with flat inside surfaces hold, bend and pull in close quarters. Coil spring adds extra speed to precision work.

NO.	LENGTH	WEIGHT	A	B	C	E	SPRING NO.
282B /282P	4 ¾″	.11 Lb.	1 1/8″	7/16″	¼″	1/16″	
282BSG	4 ¾″	.13 Lb.	1 1/8″	7/16″	¼″	1/16″	285S-S
282G	4 ¾″		1 1/8″	7/16″	¼″	1/16″	

NO. 283 MIDGET ROUND NOSE PLIER

Both jaws are rounded with a small surface and form very accurate rings, loops and bends on soft wire. Spring aids precision work in small areas.

283B /283P	4 ½″	.10 Lb.	13/16″	27/64″	¼″		
283BSG	4 ½″	.12 Lb.	13/16″	27/64″	¼″		285S-S
283G	4 ½″	.11 Lb.					

NO. 284 MIDGET END CUTTING NIPPER

Has necessary leverage and sharp, induction-hardened edges for cutting small wires, connectors, bolts, rivets, etc., close to the surface. Coil spring speeds work. Quality alloy steel.

NO.	LENGTH	WEIGHT	A	B	C	D	SPRING NO.
284B /284P	4″	.11 Lb.	5/16″	39/64″	9/32″	33/64″	
284BSG	4″	.13 Lb.	5/16″	39/64″	9/32″	33/64″	285S-S
284G		.12 Lb.					

NO. 285 MIDGET DIAGONAL CUTTING PLIER

Sharp, induction-hardened edges easily cut all types of small wire, coils, etc. Narrow jaws get into tight places.

285B /285P	4″	.10 Lb.	15/32″	13/32″	¼″	15/32″	
285BSG	4 1/8″	.12 Lb.	15/32″	13/32″	¼″	15/32″	285S-S
285G		.12 Lb.					

NO. 286 MIDGET FLAT NOSE PLIER

Flat narrow jaws get into restricted areas, provide good grip for holding and bending flat stock. Coil spring provides quick release desirable in fine work.

286B /286P	4 ¾″	.11 Lb.	1 1/8″	7/16″	¼″		
286BSG	4 ¾″	.13 Lb.	1 1/8″	7/16″	¼″	— —	285S-S
286G		.12 Lb.					

NO. 287B, BS, MIDGET FLUSH CUTTING DIAGONAL PLIER

Light rugged plier has streamlined jaws for greater access to, and quick flush cutting in confined areas.

287B	4 1/8″	.10 Lb.	5/16″	39/64″	9/32″	.....
287BSG	4 1/8″	.12 Lb.	5/16″	39/64″	9/32″	285S-S

NO. 299 WIRE STRIPPER

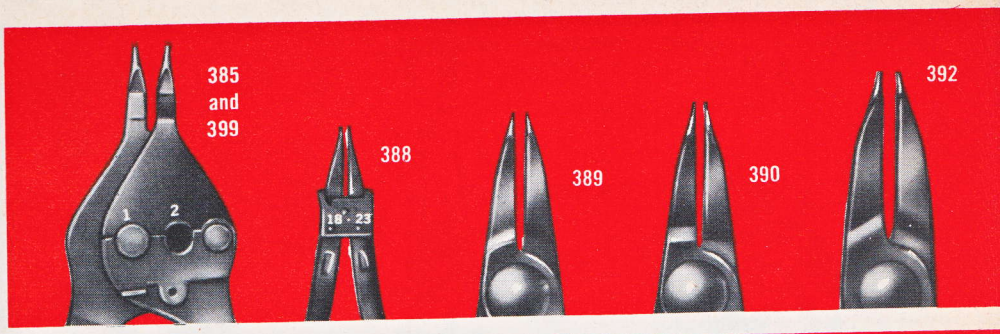
V notches nick insulation for clean, fast stripping of wire. Face ground edges cut soft wire up to No. 14 gauge. With comfortable plastic grips.

299	5″	.10 Lb.	— — — —

NOTE: For spare parts see page 75

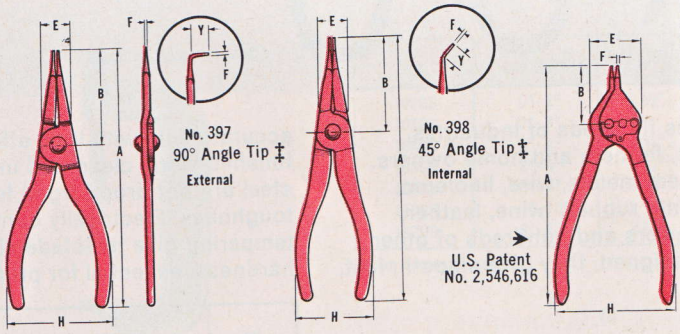
PROTO TRUARC* RETAINING RING PLIERS

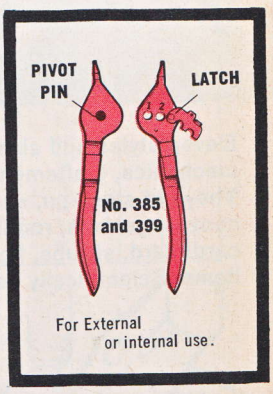
*Registered trademark of Waldes Kohinoor Inc.



12 PROTO models handle rings on shafts up to 4" and bores ¼" to 7" dia. with correct plier sizes to hold firmer, prevent ring damage, reduce danger from flying rings. Permanent can't-lose tips are precision ground, induction hardened, correctly angled, insuring faster, trouble-free work.

Federal Specs.: GGG-P-480a. (See "Proto Conversions to Fedl. Stock No's." Bulletin No. 5918.) (Fed. Specs.: apply to all pliers except 385 and 399.)





★ To obtain the right plier, simply measure the diameter of the shaft or bore where the ring is found, and refer to this table.

	PLIER NO.	SHAFT DIAM. RANGE	BORE DIAM. RANGE	A	(TOL.)	B	(TOL.)	E■	(TOL.)	F	(TOL.)	H■	(TOL.)	WEIGHT LBS.
EXTERNAL	388†	0 - 3/16"		5 1/4	± 1/8	1 1/8	± 1/16	1/2	± 1/16	.023	± .003	1 5/8	± 1/8	.0383
	391	1/4" - 7/8"		5 11/16		2 1/8	± 1/8	7/8	± 1/8	.038	+.002 −.005	2 5/16	± 1/4	.1515
	393	15/16" - 1 7/16"		6 13/16		2 3/8		7/8		.070		2 5/8		.2002
	395	1 1/2" - 4"		9 1/8		3		1 1/8		.115		4		.488
	397*	1/4" - 7/8"		5 11/16		2 3/16		7/8		.038		2 5/16		.1562
INTERNAL	390		1/4" - 5/16"	5 7/16	± 1/8	1 7/8	± 1/8	13/16	± 1/8	.022	+.002 −.003	1 11/16	± 1/4	.1405
	392		1 1/16" - 2"	6 9/16		2 1/8		7/8		.070	+.002 −.005	2		.1962
	394		2 1/16" - 4"	8 7/8		2 11/16		1 1/8		.090		2 5/8		.4195
	396		4" - 7"	16	± 1/4	3 1/2	± 1/4	1 3/4	± 1/4	.120	± .005	3 7/8		1.500
	398**		3/8" - 1"	5 1/4	± 1/8	1 23/32	± 1/8	13/16	± 1/8	.038	+.002 −.005	1 11/16		.1405
UNIV.	385	15/16" - 1 7/16	1 1/16" - 2"	7 7/8	± 1/4	1 7/8	± 1/8	1 11/16 1 7/16	± 1/8	.070	+.002 −.003	3 15/16 3 5/16	± 1/4	.344
	399	1/4" - 7/8"	3/8" - 15/16"	5 5/8"	± 1/4	1 9/16"	± 1/8	1 1/8"	± 1/8	.038	+.002 −.003	1 3/4"	± 1/4	.17

†U.S. Patent No. 2,901,817. ‡Y—max. 5/16, min. 1/4 *90° Angle Tip. **45° Angle Tip. ■For Universal Plier, dimensions are for: External Position – Internal Position

If Truarc ring numbers are known, the right plier may be ordered by referring to this table. EXAMPLE: For External rings 5100-18 thru 5100-23, the correct plier is No. 388.

	EXTERNAL							INTERNAL													
TRUARC RING TYPES	SERIES 5100 5101 5102				SERIES 5108			SERIES 5000 5001 5002				SERIES N 5000 N 5001 N 5002								SERIES 5008			
Series Dash No.	-18 ▼ -23	-25 ▼ -87	-93 ▼ -143	-150 ▼ -350	-50 ▼ -100	-106 ▼ -200	-215 ▼ -334	-100 ▼ -102	-106 ▼ -175	-181 ▼ -350	-350 ▼ -650	-25 ▼ -31	-37 ▼ -93	-156	-175	-281	-287	-315	-334	-75 ▼ -137	-143 ▼ -200	-206 ▼ -300	-315 ▼ -400
Pliers No.	388	391 397 399	393 385	395	391 397 399	393 385	395	389 398 399	392 385	394	396	390	389 398 399	392 385		394		396		389 398 399	392 385	394	396

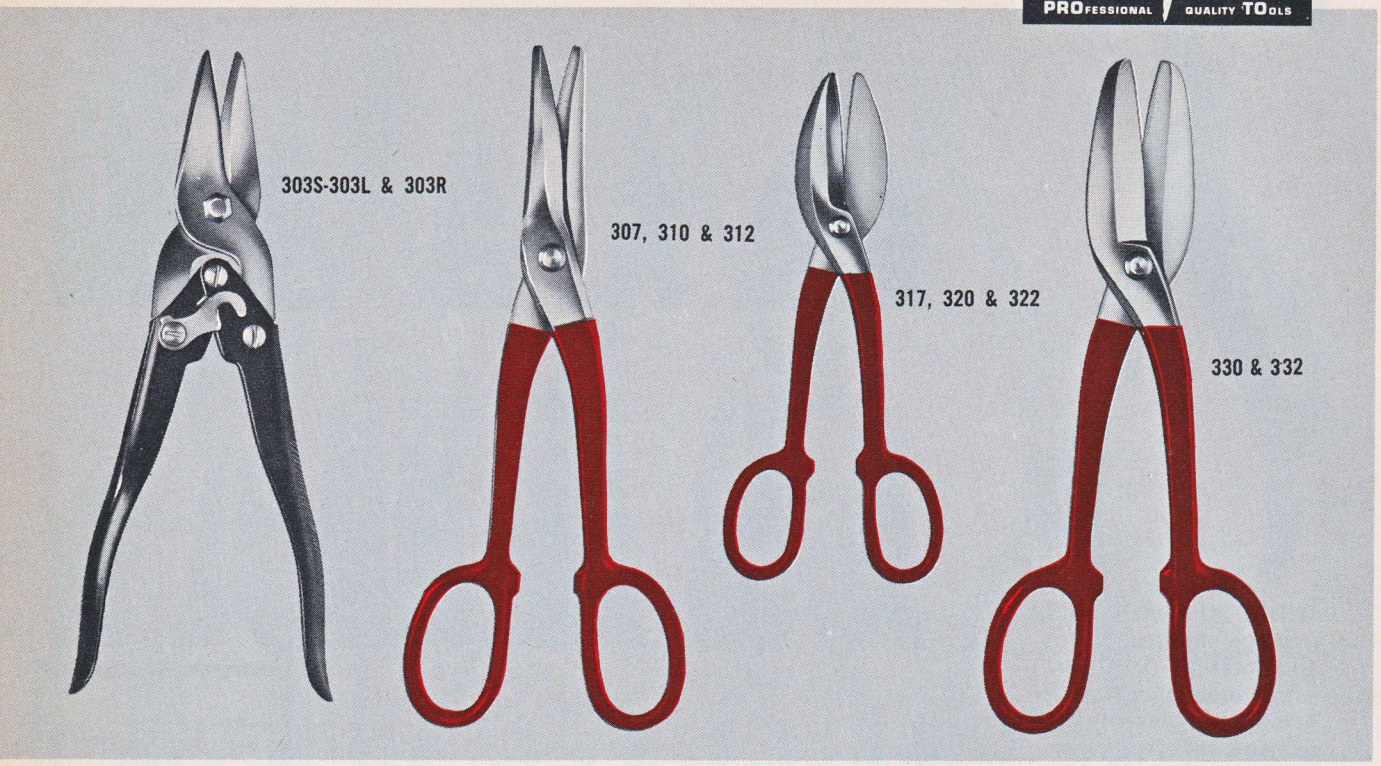
Note: Series Dash Numbers are in hundredths of inches. Thus, 5100-25 identifies External Ring Series 5100 for a shaft of approximately 0.25" O.D.

Other types and sizes of pliers can be obtained through Proto's Contract Department.

ALL-PURPOSE SNIPS

Federal Specs.: GGG-S-291d.

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS



Eleven styles and sizes fill needs of industries, mechanics, craftsmen, farmers and home owners. They cut steel, tin, sheet metals, wire, linoleum, canvas, gaskets, roofing, rubber, twine, leather, cardboard, shrubs, flowers and hundreds of other items. Scientifically designed, they give smooth, fast, accurate cuts with little effort, and produce better finished work, clean and unbent. Blades of special steel are hot drop forged for great strength and toughness. Electrically controlled heat treating and tempering give the blades in each snip the same hardness, essential for proper operation and long life.

303S, 303L, & 303R— Aviation type straight cut, left cut and right cut multiple-leverage—for intricate cutting. Compound action greatly increases power.

307, 310 & 312—Duckbill or circular snips—for cutting circles and other odd designs. Blades hollow ground for better work.

317, 320 & 322—Straight or regular snips—handy for shops, farms, homes. Streamlined with graceful curves, rounded edges.

330 & 332—Combination snips—for straight and moderately irregular cuts.

NO.	DESCRIPTION	OVERALL LENGTH	LENGTH OF CUT	WT., LBS.
303L	Multi-Leverage, Left Cut	9 11/16"	1 7/16"	.71
303R	Multi-Leverage, Right Cut	9 11/16"	1 7/16"	.71
303S	Multi-Levrg., Straight Cut	9 7/8"	1 5/8"	.71
307	Duckbill or Circular	7"	1 3/4"	.41
310	Duckbill or Circular	10"	2 1/2"	.88
312	Duckbill or Circular	12 3/4	3"	1.56
317	Straight or Regular	7"	1 3/4"	.42
320	Straight or Regular	10"	2 1/2"	.98
322	Straight or Regular	12 3/4"	3"	1.47
330	Combination Pattern	10"	2 1/2"	.82
332	Combination Pattern	12 3/4"	3"	1.46

HACKSAWS

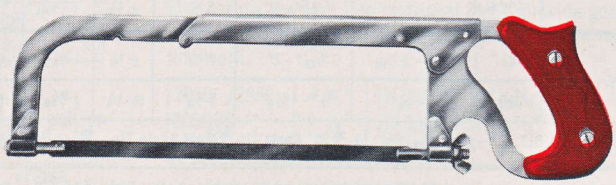
Fedl. Specs.: GGG-F-671b

NO. 352 ADJUSTABLE HACKSAW

A heavy-duty polished and plated frame with many fine features. Pistol-grip handle, of durable red plastic, is at an angle and shaped to fit the hand. Takes 8", 10" or 12" blades, which can be set in four different positions. Weight, 1.72 Lbs.

NO. 353 TUBULAR HACKSAW

Strong, rigid steel tube backbone has positive-hold settings for 10" and 12" blades. Sturdy alloy metal frames are finished in red, with black plastic pistol grip. Weight 1 lb.



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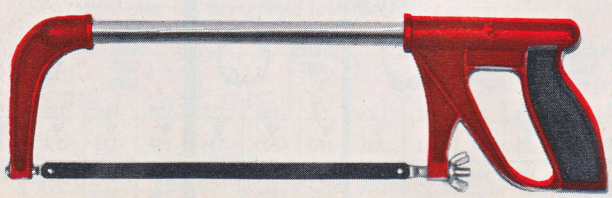

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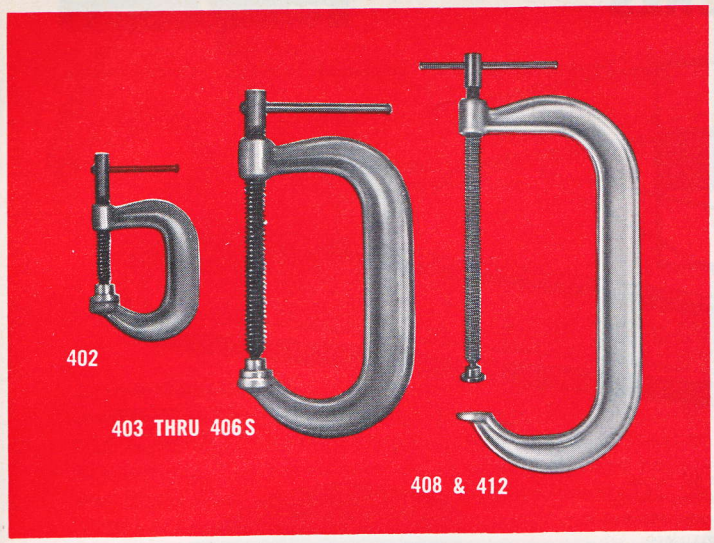
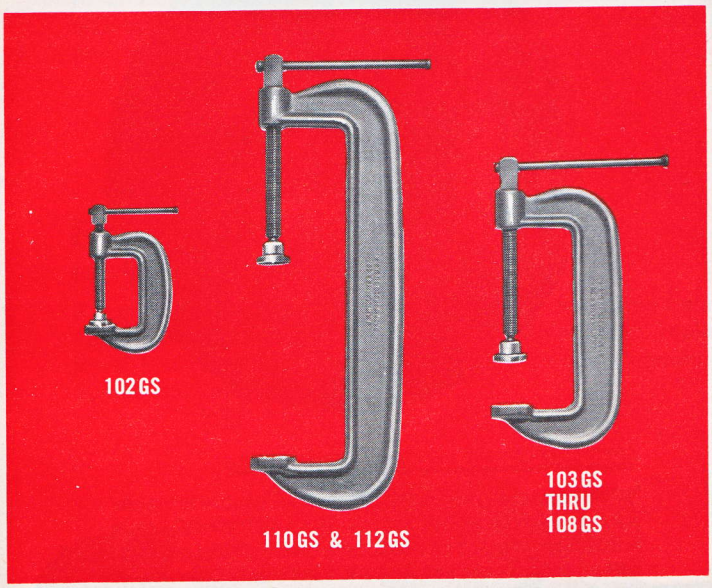
C-CLAMPS





Forged and scientifically heat treated from selected steel. Extra heavy threads increase spindle strength under pressure. Adjustable handle. Light oil finish.

REGULAR DUTY C-CLAMPS with Perma-Pad Deep Throat

Federal Spec. GGG-C-406a.

See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NO.	CAPACITY	THROAT DEPTH *	SPINDLE DIAMETER	WEIGHT EACH
402	0″- 2″	2″	1/2″	1 Lb.
† 402S	0″- 2″	2″	1/2″	1 Lb.
403	0″- 3″	2 1/2″	5/8″	2 Lb.
† 403S	0″- 3″	2 1/2″	5/8″	2 Lb.
404	0″- 4″	2 7/8″	3/4″	3 Lb.
† 404S	0″- 4″	2 7/8″	3/4″	3 Lb.
406	0″- 6″	3 5/8″	3/4″	4 Lb.
† 406S	0″- 6″	3 5/8″	3/4″	4 Lb.
408	2″- 8″	4 1/2″	3/4″	6 Lb.
408S	2″- 8″	4 1/2″	3/4″	6 Lb.
410	2″- 10″	5 3/8″	3/4″	9 Lb.
410S	2″- 10″	5 3/8″	3/4″	9 Lb.
412	2″- 12″	5 3/4″	7/8″	13 Lb.
412S	2″- 12″	5 3/4″	7/8″	13 Lb.

† SPATTER-RESISTANT—CADMIUM PLATED. For use in welding operations.

* From center of screw.

GENERAL SERVICE C-CLAMPS with Perma-Pad

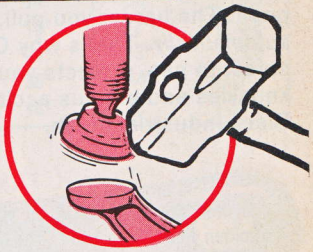
Federal Spec. GGG-C-406a

NO.	CAPACITY	THROAT DEPTH *	SPINDLE DIAMETER	WEIGHT EACH
102GS	0″- 2″	1 1/2″	9/16″	1.5
103GS	0″- 3″	2″	5/8″	2.5
104GS	0″- 4″	2 3/8″	3/4″	4.5
106GS	2″- 6″	2 1/2″	3/4″	5.5
108GS	4″- 8″	2 5/8″	3/4″	7.0
110GS	6″- 10″	2 3/4″	3/4″	7.5
112GS	8″- 12″	2 7/8″	3/4″	9.5

* From center of screw.

PROTO PERMA-PAD®

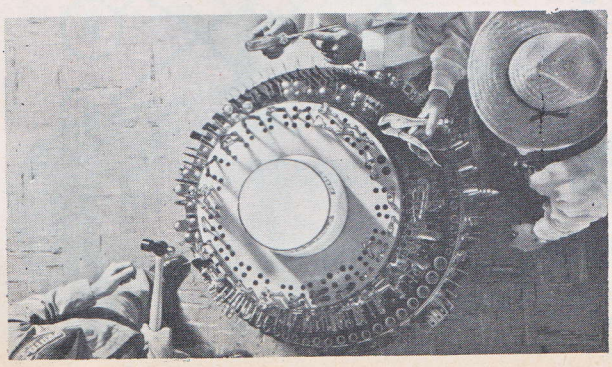
This pad was battered twenty times with a 5 lb. sledge. It's scarred, but still usable . . . hasn't lost the pad . . . and still retains free motion through a 60° arc!

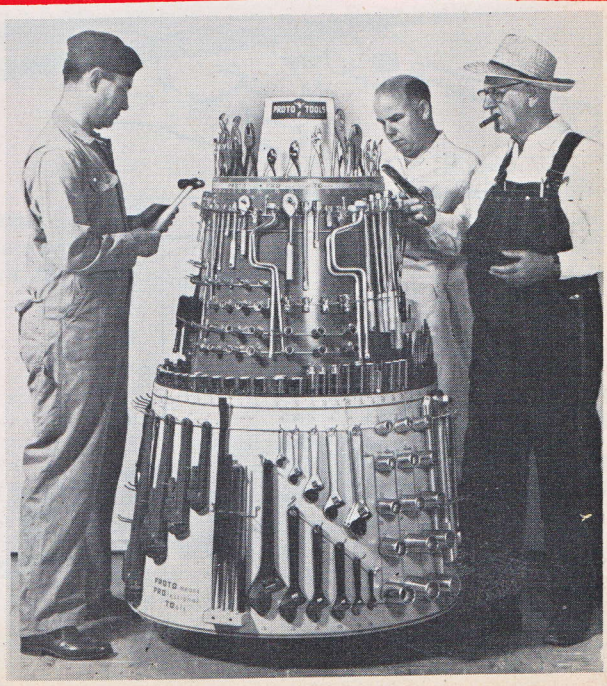


LOOK FOR THESE

PROTO TOOLMART DISPLAYS

Self-service displays like this make it possible for your dealer to put PROTO TOOLS out where you can see and feel their quality and find the type and size you want. The SD-11 SUPERMART shown here displays 313 different tools, with the number and size of each tool printed large and easy to read.



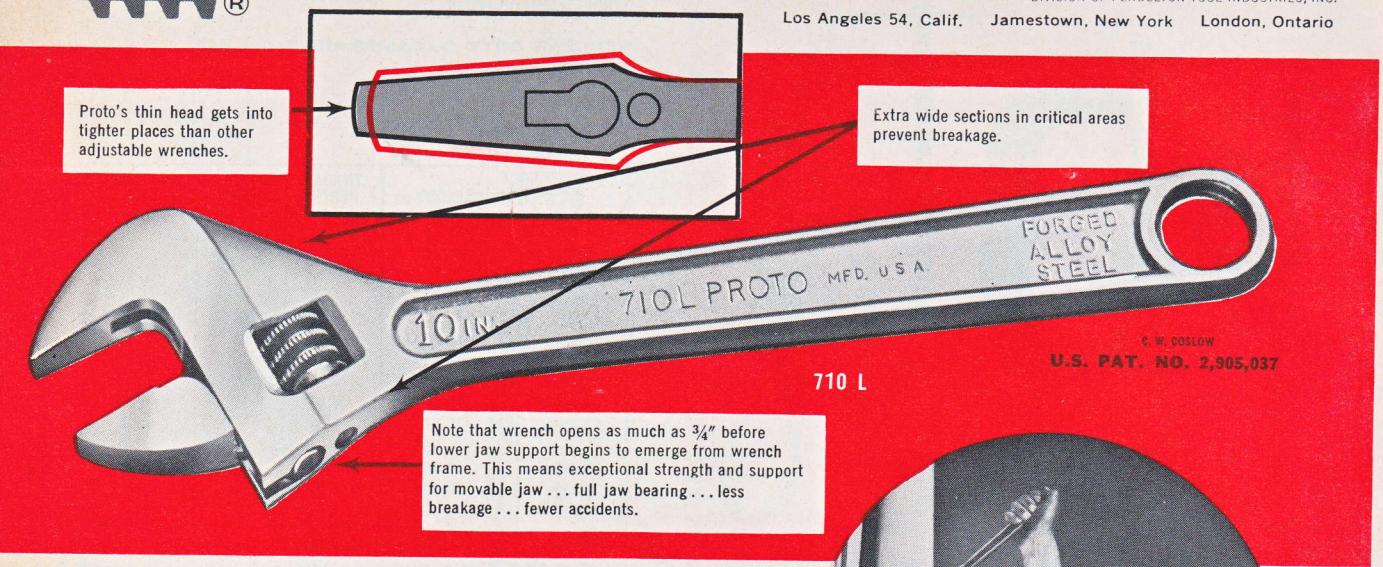


ADJUSTABLE WRENCHES

CLIK-STOP®

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

DIVISION OF PENDLETON TOOL INDUSTRIES, INC.
Los Angeles 54, Calif. Jamestown, New York London, Ontario



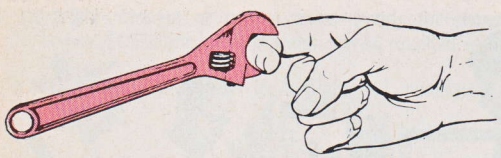
THE CLIK-STOP LOCKS AUTOMATICALLY

It *stays* locked, exactly where you set it. Pressure on the handle *keeps* it locked, automatically. When you lay the CLIK-STOP down its opening size doesn't change. You don't have to keep resetting it every time you go back to the same size fitting. Yet when there's no pressure on the handle CLIK-STOP'S golden knurl turns easily to any exact opening size. There are no buttons or gadgets to push. The harder you pull, the tighter it locks, *automatically*. That's why CLIK-STOP is the safest to use, protects you from skinned knuckles and serious accidents. Chrome or Black Industrial finish.

NOTE:
For spare parts see page 75.

TRY THIS LOCK TEST

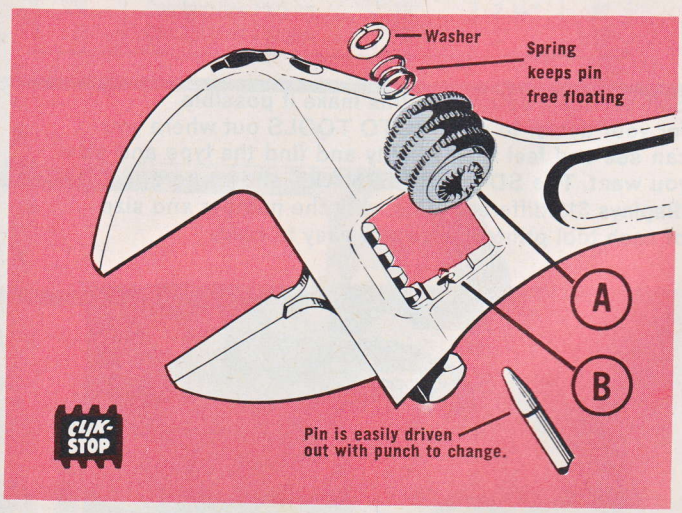
Tighten the CLIK-STOP on your finger. Try to turn the golden knurl. You can't. The weight of the handle alone keeps it locked.



Safety Engineers and Insurance Inspectors note:

Not only does the locking action become more positive as the user pulls harder on the wrench, but Clik-Stop's AUTOMATIC locking feature means that the user is protected EVERY TIME he uses the wrench, not just when he happens to think of locking the wrench as is the case with most every other locking device for adjustable wrenches. This extra safety built into the Clik-Stop makes it a faster, safer, professional tool.

NO.	LENGTH	MAXIMUM OPENING	FINISH	WT., LBS.
704L	4"	½"	Full	.10
704SL	4"	½"	Black Industrial	.10
706L	6"	¾"	Full	.23
706SL	6"	¾"	Black Industrial	.23
708L	8"	1"	Full	.54
708SL	8"	1"	Black Industrial	.54
710L	10"	1 1/8"	Full	.85
710SL	10"	1 1/8"	Black Industrial	.85
712L	12"	1 5/16"	Full	1.56
712SL	12"	1 5/16"	Black Industrial	1.56
715L	15"	1 11/16"	Full	3.25
715SL	15"	1 11/16"	Black Industrial	3.25
716L	16"	1 7/8"	Full	3.7
716SL	16"	1 7/8"	Black Industrial	3.7
718L	18"	2 1/16"	Full	4.83
718SL	18"	2 1/16"	Black Industrial	4.83



PROTO LOCKING FEATURE

Grooves (**A**) in spring-loaded knurl mesh with teeth (**B**) in wrench body to hold exact jaw openings. Pressure on lower jaw, when in use, pulls down on knurl, automatically locking teeth still tighter.

ADJUSTABLE WRENCHES—22½° ANGLE

712

Federal Description: "Open end, 22½° angle, heavy-duty adjustable wrench. Specs.: GGG-W-631a, Type I

Forged from fine alloy steel, these wrenches are strong—though thin and light to permit faster work. The seven full-finish wrenches are highly polished and then chrome plated to prevent rust and enhance appearance. The seven semi-finish wrenches have polished heads and back. Absence of a corner lip on the movable jaw (in most sizes) allows a square nut to fit flat against the inside jaw surface, resulting in greater strength and better adaptability to different size nuts. Every handle uses a husky I-beam construction and has a hole for hanging up the wrench.

NOTE: For detailed description of exclusive features of this wrench and of Proto's Clik- Stop, the automatic-locking adjustable wrench, see page 16.

NO.	NOM. LENGTH	MAX. OPENING	FINISH	WT., LBS.
704	4″	½″	Full	.10
704S	4″	½″	Semi	.10
706	6″	¾″	Full	.23
706S	6″	¾″	Semi	.23
708	8″	1″	Full	.54
708S	8″	1″	Semi	.54
710	10″	1 ⅛″	Full	.85
710S	10″	1 ⅛″	Semi	.85
712	12″	1 5/16″	Full	1.56
712S	12″	1 5/16″	Semi	1.56
715	15″	1 11/16″	Full	3.25
715S	15″	1 11/16″	Semi	3.25
716	16″	1 ⅞″	Full	3.68
716S	16″	1 ⅞″	Semi	3.68
718	18″	2 1/16″	Full	4.8
718S	18″	2 1/16″	Semi	4.8
720	20″	2 ½″	Full	6.26
720S	20″	2 ½″	Semi	6.26

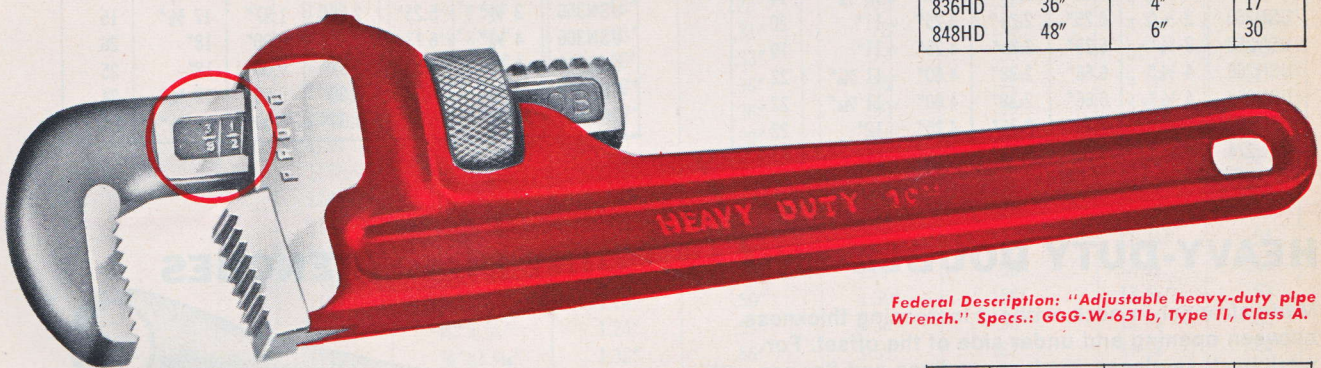
NOTE: For spare parts see page 75

PIPE WRENCHES

HEAVY-DUTY TYPE

Rugged design, engineered for light weight and good balance. Features include heat-treated, precision milled teeth, replaceable lower jaw ; pipe sizes on forged hook jaw, I-beam handle of alloy ductile iron, and alloy steel jaws.

NO.	LENGTH	MAXIMUM PIPE SIZE	WT., LBS.
806HD	6″	¾″	.45
808HD	8″	1″	.85
810HD	10″	1 ½″	1.80
814HD	14″	2″	3.5
818HD	18″	2 ½″	5.8
824HD	24″	3″	9.6
836HD	36″	4″	17
848HD	48″	6″	30

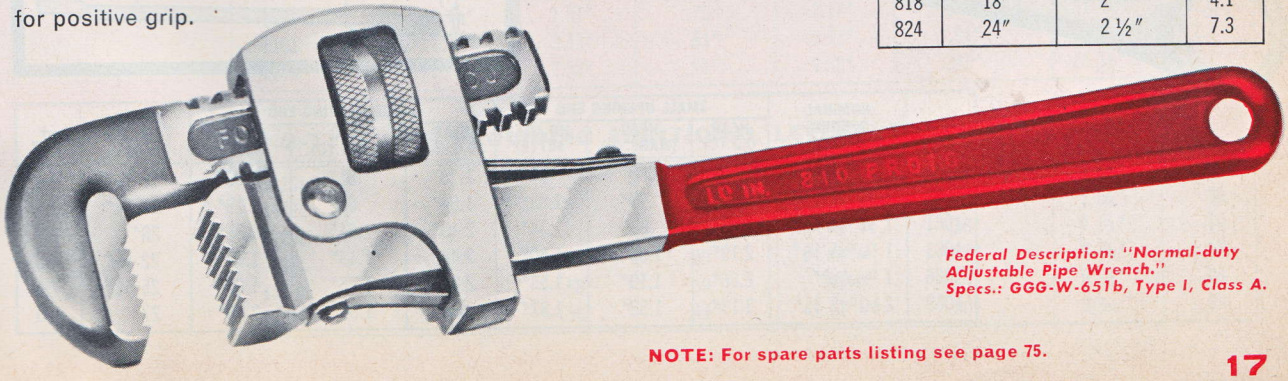


Federal Description: "Adjustable heavy-duty pipe Wrench." Specs.: GGG-W-651b, Type II, Class A.

NORMAL-DUTY STILLSON-PATTERN

Strength far exceeds Government normal-duty specifications. Have forged and heat-treated special steel handle of panel I-beam type, strengthened strain points, an easy-turning knurl, and hard, tough jaw teeth that are deep-milled for positive grip.

NO.	LENGTH	MAXIMUM PIPE SIZE	WT., LBS.
806	6″	½″	.32
808	8″	¾″	.65
810	10″	1″	1.38
814	14″	1 ½″	2.6
818	18″	2″	4.1
824	24″	2 ½″	7.3



Federal Description: "Normal-duty Adjustable Pipe Wrench." Specs.: GGG-W-651b, Type I, Class A.

NOTE: For spare parts listing see page 75.

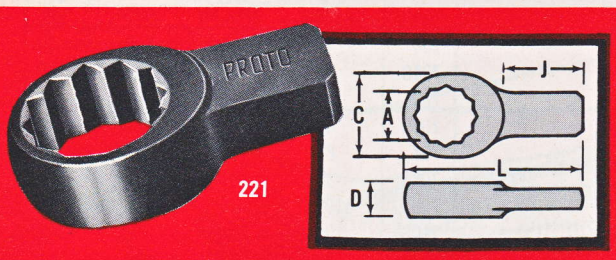
HEAVY-DUTY INDUSTRIAL WRENCHES

Slugging Wrenches—12-Point Box Type

PROTO TOOLS — PROfessional QUALITY TOols

For all types of heavy installation and repair work where space is restricted. Opening fits snugly upon bolt or nut and remains in position when struck with heavy sledge. Forged from special alloy steel and protected from rust by Parco-Lubrite finish.

Fedl. Description: "Slugging Wrench, 12-Point Box, Short (or Long)." Specs.: GGG-W-00636c. Type XI, Style 1 (Nos. USN221-274) and Style 2 (Nos. USN326-374).



NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THKNS. (D)	SHANK LGTH. (J)	TOTAL LGTH. (L)	WT., LBS.
USN221	1 5/16"	2.44"	.88"	3.25"	6 1/4"	1.84
USN223	1 7/16"	2.44"	.88"	3.25"	6 1/4"	1.80
USN224	1 1/2"	2.44"	.88"	3.25"	6 1/4"	1.76
USN226	1 5/8"	2.94"	1.13"	3.75"	7 1/8"	3.3
USN227	1 11/16"	2.94"	1.13"	3.75"	7 1/8"	3.3
USN229	1 13/16"	2.94"	1.13"	3.75"	7 1/8"	3.2
USN230	1 7/8"	2.94"	1.13"	3.75"	7 1/8"	3.0
USN232	2"	3.59"	1.38"	3.75"	7 21/32"	5.0
USN235	2 3/16"	3.59"	1.38"	3.75"	7 21/32"	4.7
USN236	2 1/4"	3.59"	1.38"	3.75"	7 21/32"	4.7
USN238	2 3/8"	4.25"	1.63"	3.87"	8 1/2"	8.0
USN241	2 9/16"	4.25"	1.63"	3.87"	8 1/2"	7.6
USN242	2 5/8"	4.25"	1.63"	3.87"	8 21/32"	7.7
USN244	2 3/4"	4.69"	1.88"	4.50"	9 21/32"	12
USN247	2 15/16"	4.69"	1.88"	4.50"	9 21/32"	12
USN248	3"	4.69"	1.88"	4.50"	9 21/32"	11
USN250	3 1/8"	4.69"	1.88"	4.50"	9 21/32"	11
USN254	3 3/8"	5.63"	2.00"	4.00"	10 3/8"	14
USN256	3 1/2"	5.63"	2.00"	4.00"	10 3/8"	14
USN260	3 3/4"	6.25"	2.25"	4.25"	11"	20
USN262	3 7/8"	6.25"	2.25"	4.25"	11"	19
USN266	4 1/8"	6.66"	2.38"	4.00"	11 7/16"	22
USN268	4 1/4"	6.66"	2.38"	4.00"	11 7/16"	22
USN272	4 1/2"	7.19"	2.75"	4.25"	12"	28
USN274	4 5/8"	7.19"	2.75"	4.25"	12"	27

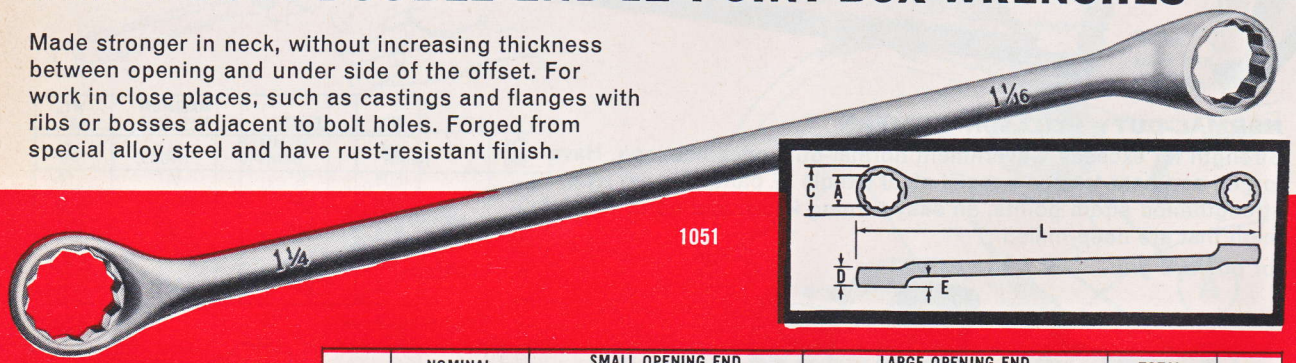
Additional Sizes Can Be Made on Special Order.

NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THKNS. (D)	HEAD OFFSET (E)	TOTAL LENGTH (L)	WT., LBS.
USN326	1 5/8"	2.75"	1.13"	1.00"	10 1/8"	3.2
USN327	1 11/16"	2.75"	1.13"	1.00"	10 1/8"	3.1
USN329	1 13/16"	2.75"	1.13"	1.00"	10 1/8"	3.0
USN330	1 7/8"	3.00"	1.25"	1.12"	10 3/4"	4.0
USN332	2"	3.00"	1.25"	1.12"	10 3/4"	3.8
USN335	2 3/16"	3.56"	1.38"	1.25"	11"	5.0
USN336	2 1/4"	3.56"	1.38"	1.25"	11"	4.9
USN338	2 3/8"	4.13"	1.63"	1.50"	14 1/2"	8.6
USN341	2 9/16"	4.13"	1.63"	1.50"	14 1/2"	8.3
USN342	2 5/8"	4.13"	1.63"	1.50"	14 1/2"	8.0
USN344	2 3/4"	4.13"	1.63"	1.50"	14 1/2"	7.7
USN348	3"	4.63"	1.88"	1.75"	15 3/4"	12
USN350	3 1/8"	4.63"	1.88"	1.75"	15 3/4"	11
USN354	3 3/8"	5.25"	2.00"	1.87"	17 3/8"	16
USN356	3 1/2"	5.25"	2.00"	1.87"	17 3/8"	15
USN366	4 1/8"	6.13"	2.88"	0.00"	18"	26
USN368	4 1/4"	6.13"	2.88"	0.00"	18"	25
USN372	4 1/2"	6.63"	3.00"	0.00"	19 3/4"	34
USN374	4 5/8"	6.63"	3.00"	0.00"	19 3/4"	33

NOTE: See page 27 for other heavy duty wrenches.

HEAVY-DUTY DOUBLE-END 12-POINT BOX WRENCHES

Made stronger in neck, without increasing thickness between opening and under side of the offset. For work in close places, such as castings and flanges with ribs or bosses adjacent to bolt holes. Forged from special alloy steel and have rust-resistant finish.



NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END			LARGE OPENING END			TOTAL LENGTH (L)	WT., LBS.
		HEAD O.D. (C)	HEAD THKNS. (D)	HD. OFF-SET (E)	HEAD O.D. (C)	HEAD THKNS. (D)	HD. OFF-SET (E)		
1051	1 1/16"x1 1/4"	1.56"	.69"	.94"	1.78"	.81"	1.06"	16 1/2"	2.1
1053	1 1/8"x1 5/16"	1.63"	.75"	1.03"	1.94"	.88"	1.19"	18 1/8"	2.4
1061	1 1/4"x1 7/16"	1.78"	.88"	1.34"	2.13"	.94"	1.37"	20"	3.9
1063	1 7/16"x1 5/8"	2.19"	1.00"	1.50"	2.47"	1.13"	1.50"	22 1/2"	4.6
1066	1 13/16"x2"	2.66"	1.19"	1.56"	2.84"	1.25"	1.66"	25 3/4"	7.4
1069	2 3/16"x2 3/8"	3.13"	1.38"	1.87"	3.38"	1.50"	2.00"	27"	9.0

NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

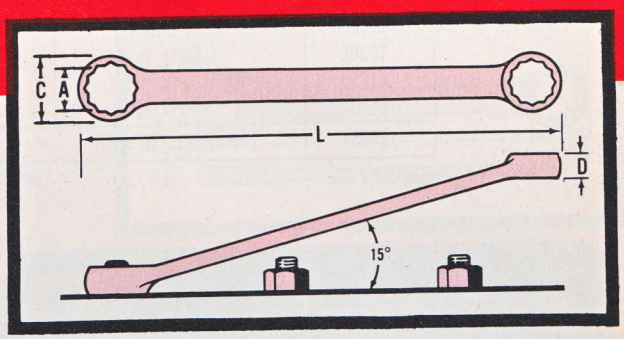
12-POINT BOX WRENCHES

Safety Type—with Strong, Thin Walls for Maximum Clearance

Fedl. Description: "Box Wrench, Double Head, 12-Point, 15° Offset Each End." Specs.: GGG-W-00636c, Type 1, Class 1, Style 1 (Nos. 1120L-1131L and 1133-1164) and Style 2 (Nos. 1120-1131).

1120-1164

Thin but very strong box walls and resulting compact heads permit use in close quarters. Walls are thinner at the wrench tip than at the shank end of the box where greater strength is needed. Box openings are countersunk for easy placement over a nut. Streamlined shanks provide comfortable grip, reduce the weight and allow long use without fatigue. These box wrenches are forged from special alloy steels and scientifically heat treated to give the desired strength, toughness, and hardness. Accurate openings speed work, reduce wear. Chrome plating gives a bright, rust-proof finish.



Heads are offset 15° from shank to clear objects and to protect hands.

NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END		LARGE OPENING END		TOTAL LENGTH (L)	WT., LBS.
		HEAD O.D. (C)	HEAD THKNS. (D)	HEAD O.D. (C)	HEAD THKNS. (D)		
1120	5/16" x 3/8"	.53"	.28"	.60"	.31"	4 1/4"	.05
1122	3/8" x 7/16"	.63"	.31"	.72"	.33"	4 5/8"	.06
1125	7/16" x 1/2"	.69"	.33"	.77"	.36"	5"	.09
1126	1/2" x 9/16"	.77"	.36"	.85"	.39"	5 3/8"	.11
1127	1/2" x 19/32"	.77"	.36"	.90"	.39"	5 9/16"	.12
1130	9/16" x 5/8"	.85"	.39"	.94"	.44"	5 3/4"	.14
1131	5/8" x 3/4"	.94"	.44"	1.10"	.50"	6 1/8"	.20
1134	5/8" x 11/16"	.97"	.44"	1.06"	.45"	10 5/8"	.34
1135	11/16" x 3/4"	1.06"	.47"	1.14"	.50"	11 1/4"	.43
1136	11/16" x 7/8"	1.08"	.47"	1.34"	.53"	11 7/8"	.54
1137	11/16" x 25/32"	1.05"	.47"	1.17"	.50"	12 1/2"	.43
1139	3/4" x 7/8"	1.14"	.50"	1.30"	.56"	13 1/8"	.63
1140	13/16" x 7/8"	1.24"	.53"	1.30"	.56"	13 7/8"	.65
1141	7/8" x1 1/16"	1.32"	.56"	1.58"	.61"	14 5/8"	.84
1145	15/16" x1	1.40"	.58"	1.50"	.59"	15 1/2"	.93
1147	15/16" x1 1/16"	1.43"	.59"	1.62"	.59"	16 3/8"	1.08
1150	1 1/16" x1 1/8"	1.59"	.61"	1.68"	.66"	17 1/4"	1.17
1151	1 1/16" x1 1/4"	1.59"	.61"	1.85"	.69"	18 1/4"	1.38
1155	1 1/4" x1 5/16"	1.85"	.70"	1.95"	.72"	19 1/4"	1.54
1160	1 1/4" x1 3/8"	1.85"	.70"	2.03"	.73"	20 1/4"	1.82
1161	1 1/4" x1 7/16"	1.91"	.75"	2.18"	.78"	21 1/4"	2.0
1162	1 7/16" x1 1/2"	2.13"	.81"	2.23"	.84"	22 1/4"	2.3
1164	1 5/8" x1 11/16"	2.52"	.91"	2.58"	.97"	24 1/2"	3.1

LONG-TYPE (FOR PROVIDING ADDITIONAL LEVERAGE ON HARD PULLS)

1120L	5/16" x 3/8"	.54"	.31"	.62"	.33"	7 3/8"	.09
1122L	3/8" x 7/16"	.63"	.33"	.72"	.34"	7 5/8"	.11
1125L	7/16" x 1/2"	.71"	.35"	.79"	.36"	7 7/8"	.14
1126L	1/2" x 9/16"	.79"	.38"	.88"	.38"	8 3/8"	.18
1130L	9/16" x 5/8"	.88"	.39"	.96"	.44"	8 7/8"	.24
1131L	5/8" x 3/4"	.96"	.44"	1.12"	.50"	9 7/16"	.37

BOX WRENCH SETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

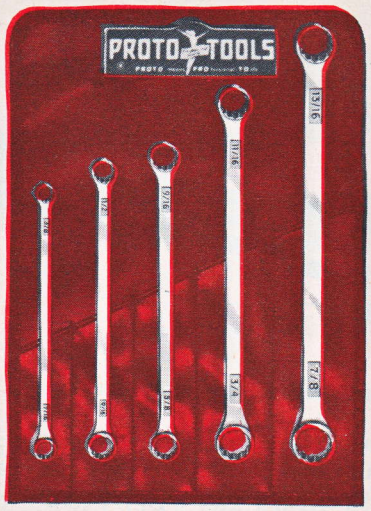
NO. 1100K SET

A fine basic set of five double-end box wrenches in the most-used range to which you can add more sizes as they are needed. All opening sizes are provided from 3/8" through 7/8" in 1/16" steps.

CONTENTS OF NO. 1100K SET

NO.	OPENING SIZES	LENGTH
1122L	3/8" x 7/16"	7 5/8"
1126L	1/2" x 9/16"	8 3/8"
1130L	9/16" x 5/8"	8 7/8"
1135	11/16" x 3/4"	11 1/4"
1140	13/16" x 7/8"	13 7/8"
2405	Vinyl Kit, 10"x15"	

Weight, 2.2 Lbs.



NO. 1100M SET

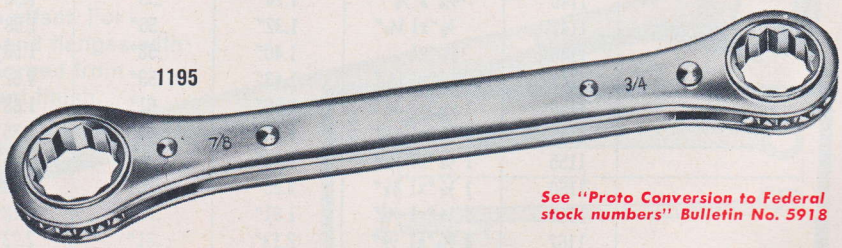
This master set of ten double-end box wrenches for professional use will take care of almost all common size nuts and bolts. It includes every nominal opening size from 5/16" through 1 1/8" in 1/16" steps.

CONTENTS OF NO. 1100M SET

NO.	OPENING SIZES	LENGTH
1120L	5/16" x 3/8"	7 3/8"
1122L	3/8" x 7/16"	7 5/8"
1125L	7/16" x 1/2"	7 7/8"
1126L	1/2" x 9/16"	8 3/8"
1130L	9/16" x 5/8"	8 7/8"
1131L	5/8" x 3/4"	9 7/16"
1135	11/16" x 3/4"	11 1/4"
1140	13/16" x 7/8"	13 7/8"
1145	15/16" x 1"	15 1/2"
1150	1 1/16" x 1 1/8"	17 1/4"
2418	Vinyl Kit, 18 7/8" x 18 1/2"	

Weight, 5.2 Lbs.

RATCHETING BOX WRENCHES



See "Proto Conversion to Federal stock numbers" Bulletin No. 5918

Many applications. User can safely loosen or tighten a nut and then fast run the nut without lifting wrench or switching to another tool. Turning over wrench reverses direction. Laminated construction adds strength and reduces weight. Chrome plated for rust protection.

NO.	NOMINAL OPENING SIZES	NO. OF POINTS IN BOX	SMALL OPENING END HEAD O.D.	SMALL OPENING END HEAD THKNS.	LARGE OPENING END HEAD O.D.	LARGE OPENING END HEAD THKNS.	TOTAL LENGTH	WT., LBS.
1191	1/4" x 5/16"	6	.56"	.38"	.63"	.38"	4 1/4"	.13
1192	3/8" x 7/16"	6	.75"	.38"	.88"	.38"	5 1/2"	.18
1193	1/2" x 9/16"	6	1.00"	.50"	1.13"	.50"	6 3/4"	.39
1194	5/8" x 11/16"	12	1.19"	.50"	1.31"	.50"	8"	.60
1196	5/8" x 3/4"	12	1.31"	.50"	1.44"	.50"	8 1/8"	.64
1195	3/4" x 7/8"	12	1.38"	.50"	1.56"	.50"	9 1/4"	.73

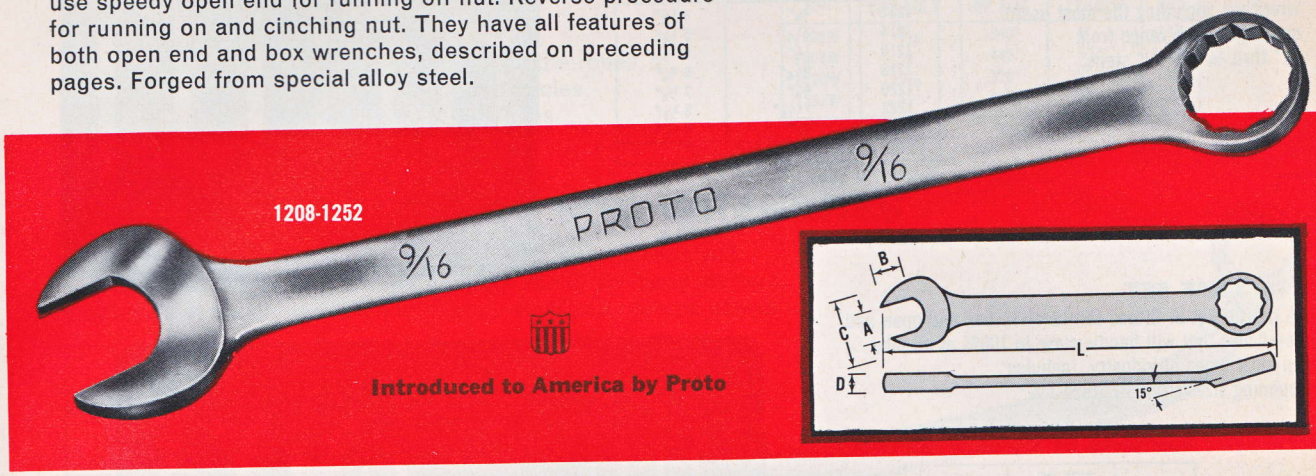
NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

COMBINATION BOX & OPEN END WRENCHES

THE TYPE FOR BOTH SPEED AND SAFETY

Same opening size on each end. Use safe box end for breaking loose a nut, turn the wrench end for end, and then use speedy open end for running off nut. Reverse procedure for running on and cinching nut. They have all features of both open end and box wrenches, described on preceding pages. Forged from special alloy steel.

Federal Description: "Combination wrench, open end and 15° offset box." Specs.: GGG-W-00636c. Type III



NO.	NOMINAL OPENING SIZES (A)	OPEN END			BOX END			TOTAL LENGTH (L)	WT., LBS.
		JAW DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)	NO. OF POINTS	HEAD O.D. (C)	HEAD THKNS. (D)		
1208	1/4"	.25"	.62"	.19"	6	.43"	.25"	3 5/16"	.02
1210	5/16"	.25"	.72"	.20"	12	.53"	.28"	3 3/4"	.03
1211	11/32"	.28"	.78"	.20"	6	.53"	.28"	4"	.06
1212	3/8"	.28"	.85"	.20"	12	.60"	.31"	4 1/2"	.06
1214	7/16"	.37"	.97"	.23"	12	.70"	.34"	5 1/4"	.10
1216	1/2"	.37"	1.08"	.27"	12	.81"	.36"	6"	.14
1218	9/16"	.50"	1.23"	.30"	12	.88"	.38"	6 3/4"	.20
1220	5/8"	.50"	1.36"	.33"	12	.96"	.44"	7 1/2"	.27
1222	11/16"	.56"	1.50"	.34"	12	1.04"	.47"	8 1/4"	.34
1224	3/4"	.59"	1.63"	.38"	12	1.12"	.50"	9 1/4"	.45
1226	13/16"	.62"	1.75"	.39"	12	1.22"	.53"	10 1/4"	.55
1228	7/8"	.69"	1.83"	.41"	12	1.30"	.53"	11 1/4"	.65
1230	15/16"	.75"	2.00"	.44"	12	1.40"	.58"	12 3/8"	.82
1232	1"	.75"	2.06"	.47"	12	1.50"	.59"	13 3/8"	.94
1234	1 1/16"	.81"	2.26"	.50"	12	1.58"	.63"	14 3/8"	1.19
1236	1 1/8"	.81"	2.37"	.52"	12	1.68"	.66"	15 3/4"	1.36
1240	1 1/4"	1.00"	2.63"	.53"	12	1.86"	.69"	17"	1.68
1242	1 5/16"	1.06"	2.70"	.56"	12	1.96"	.70"	18 1/8"	1.94
1244	1 3/8"	1.09"	2.88"	.59"	12	2.04"	.73"	19 3/8"	2.0
1246	1 7/16"	1.12"	3.10"	.65"	12	2.18"	.78"	20 5/8"	2.6
1248	1 1/2"	1.25"	3.06"	.66"	12	2.19"	.84"	21 3/4"	3.0
1252	1 5/8"	1.25"	3.36"	.69"	12	2.42"	.90"	23"	3.50
1254	1 11/16"	1.25"	3.36"	.69"	12	2.42"	.90"	23"	3.42
1256	1 3/4"	1.53"	3.94"	.81"	12	3"	1.06"	26"	5.80
1258	1 13/16"	1.53"	3.94"	.81"	12	3"	1.06"	26"	5.80
1260	1 7/8"	1.47"	3.94"	.81"	12	3"	1.06"	26"	5.60
1264	2"	1.41"	3.94"	.81"	12	3"	1.06"	26"	5.48

LONG-TYPE (FOR PROVIDING ADDITIONAL LEVERAGE ON HARD PULLS)

1208L	1/4"	.25"	.62"	.19"	6	.43"	.25"	4 7/8"	.04
1210L	5/16"	.25"	.72"	.20"	12	.53"	.28"	5 3/4"	.05
1212L	3/8"	.28"	.85"	.20"	12	.61"	.31"	6 5/8"	.08
1214L	7/16"	.37"	.97"	.23"	12	.71"	.34"	7 1/2"	.13
1216L	1/2"	.37"	1.08"	.27"	12	.79"	.36"	8 1/4"	.17
1218L	9/16"	.50"	1.23"	.30"	12	.88"	.38"	9 1/8"	.25
1220L	5/8"	.50"	1.36"	.33"	12	.98"	.44"	10"	.33
1222L	11/16"	.56"	1.50"	.34"	12	1.06"	.47"	10 7/8"	.38
1224L	3/4"	.59"	1.63"	.38"	12	1.14"	.50"	11 3/4"	.51

COMBINATION WRENCH SETS

PROTO TOOLS
PROfessional QUALITY TOols

NO. 1200H SET

A very popular basic set of seven combination box and open end wrenches, including the most useful openings. Sizes range from 3/8" thru 3/4" in 1/16" steps.

CONTENTS OF NO. 1200H SET

NO.	SIZE OF OPENINGS	LENGTH
1212	3/8"	4 1/2"
1214	7/16"	5 1/4"
1216	1/2"	6"
1218	9/16"	6 3/4"
1220	5/8"	7 1/2"
1222	11/16"	8 1/4"
1224	3/4"	9 1/4"
2404	Vinyl Kit, 11 3/8"x10 1/2"	

Weight, 1.84 Lbs.

NO. 1200F SET

A master set of fifteen combination box and open end wrenches that will handle close to 100% of all jobs in most types of industry. Includes opening sizes from 5/16" thru 1 1/4".

CONTENTS OF NO. 1200F SET

NO.	SIZE OF OPENINGS	LENGTH
1210	5/16"	3 3/4"
1212	3/8"	4 1/2"
1214	7/16"	5 1/4"
1216	1/2"	6"
1218	9/16"	6 3/4"
1220	5/8"	7 1/2"
1222	11/16"	8 1/4"
1224	3/4"	9 1/4"
1226	13/16"	10 1/4"
1228	7/8"	11 1/4"
1230	15/16"	12 3/8"
1232	1"	13 3/8"
1234	1 1/16"	14 3/8"
1236	1 1/8"	15 3/4"
1240	1 1/4"	17"
2413	Vinyl Kit, 25"x18 1/2"	

Weight, 10 Lbs.

NO. 1200L SET

A very useful set of the long-type, extra-leverage wrenches. Includes all nine available sizes, from 1/4" thru 3/4".

CONTENTS OF NO.1200L SET

NO.	SIZE OF OPENINGS	LENGTH
1208L	1/4"	4 7/8"
1210L	5/16"	5 3/4"
1212L	3/8"	6 5/8"
1214L	7/16"	7 1/2"
1216L	1/2"	8 1/4"
1218L	9/16"	9 1/8"
1220L	5/8"	10"
1222L	11/16"	10 7/8"
1224L	3/4"	11 3/4"
2415	Vinyl Kit, 12 3/4"x13 1/8"	

Weight, 2.4 Lbs.

METRIC COMBINATION WRENCHES AND KITS

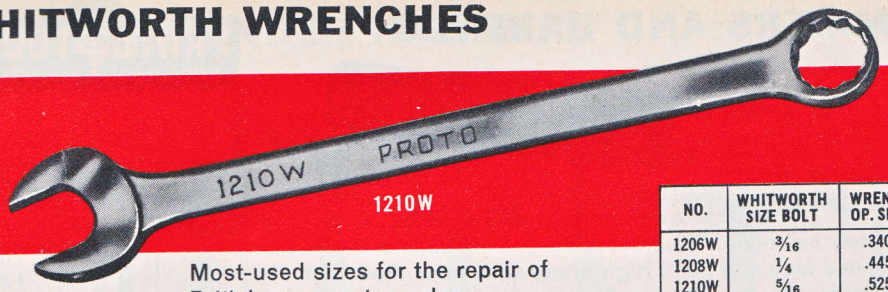
Seven most used sizes—11mm, 12mm, 13mm, 14mm, 16mm, 17mm, and 19mm. Comes in bright red and blue plastic kit. Each Proto Metric Wrench is properly broached and drop-forged to assure the right combination of strength and toughness at the most critical places.

No. 1200M Kit

NO.	SIZE OF OPENINGS	LENGTH
1211M	11mm	5 1/4"
1212M	12mm	5 5/8"
1213M	13mm	6"
1214M	14mm	6 3/4"
1216M	16mm	7 1/2"
1217M	17mm	8 1/4"
1219M	19mm	9 1/4"
2404M	Vinyl Kit, 11 3/8"x10 1/2"	

Weight, 1.84 Lbs.

WHITWORTH WRENCHES



1210W

Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.

NO.	WHITWORTH SIZE BOLT	WRENCH OP. SIZE	TOTAL LENGTH	WT. LBS.
1206W	3/16	.340″	4″	.13
1208W	1/4	.445″	5 1/4″	.18
1210W	5/16	.525″	6″	.25
1212W	3/8	.600″	7 1/2″	.32

OBSTRUCTION 12-PT. BOX WRENCHES

For turning nuts where obstructions prevent easy access with standard box wrenches, and particularly useful on many starters. Clearance at middle is 1″. Made of alloy steel and chrome plated.

Fedl. Description: "Box Wrench, Double Head, 12-Point, Half Moon." Specs.: GGG-W-00636c., Type II.

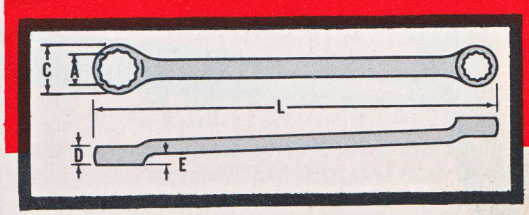
NO.	NOMINAL OPENING SIZES	HEAD THICK-NESS	LENGTH	WT., LBS.
1725	7/16″x 1/2″	23/64″	5 3/4″	.12
1730	9/16″x 5/8″	3/8″	6 5/8″	.20
1731	5/8″x 3/4″	13/32″	7 5/8″	.33

1725-1731

OFFSET BOX WRENCHES

8112-8127

8160-8163



MIDGET TYPE—HEXAGON (6-POINT)

NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END			LARGE OPENING END			TOTAL LENGTH (L)	WT., LBS.
		HEAD O.D. (C)	HEAD THKNS. (D)	HD. OFF-SET (E)	HEAD O.D. (C)	HEAD THKNS. (D)	HD. OFF-SET (E)		
8112	3/16″x 13/64″	.31″	.16″	.25″	.33″	.16″	.25″	2 7/8″	.01
8117	7/32″x 15/64″	.35″	.18″	.25″	.38″	.18″	.25″	3 1/8″	.02
8122	1/4″x 9/32″	.41″	.20″	.28″	44″	.20″	.28″	3 27/64″	.03
8127	5/16″x 11/32″	.48″	.21″	.30″	.53″	.21″	.30″	3 7/8″	.04

SHORT TYPE—HEXAGON (6-POINT)

8160H	3/8″x 7/16″	.63″	.34″	.56″	.70″	.36″	.56″	5″	.09
8161H	1/2″x 9/16″	.78″	.36″	.62″	.85″	.36″	.62″	5 1/2″	.14

SHORT TYPE—DOUBLE HEXAGON (12-POINT)

8160	3/8″x 7/16″	.63″	.34″	.56″	.70″	.36″	.56″	5″	.08
8161	1/2″x 9/16″	.78″	.36″	.62″	.85″	.36″	.62″	5 1/2″	.12
8162	5/8″x 11/16″	.95″	.47″	.72″	1.03″	.47″	.72″	6″	.19
8163	3/4″x 13/16″	1.10″	.55″	.81″	1.23″	.55″	.81″	6 1/2″	.25

LONG TYPE—HEXAGON (6-POINT)

8180H	3/8″x 7/16″	.62″	.33″	.56″	.70″	.34″	.56″	7 3/4″	.16
8181H	1/2″x 9/16″	.78″	.36″	.62″	.85″	.36″	.62″	9″	.26

LONG TYPE—DOUBLE HEXAGON (12-POINT)

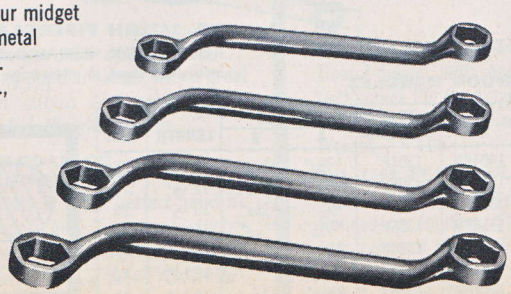
8180	3/8″x 7/16″	.62″	.33″	.56″	.70″	.34″	.56″	7 3/4″	.16
8181	1/2″x 9/16″	.78″	.36″	.62″	.85″	.36″	.62″	9″	.25
8182	5/8″x 11/16″	.95″	.47″	.72″	1.03″	.47″	.72″	10 1/4″	.38
8183	25/32″x 13/16″	1.19″	.55″	.81″	1.29″	.55″	.81″	11 1/2″	.46
8184	3/4″x 7/8″	1.10″	.55″	.81″	1.36″	.61″	.87″	12 3/4″	.66
8185	15/16″x 1″	1.36″	.67″	.94″	1.42″	.67″	.94″	14″	.93

Reach into casting depressions, counterbored places and other tight spots where usual wrenches can't be used. Heads are offset 45°, providing the needed height for many jobs. Thin, strong box walls allow maximum clearance. Forged from special alloy steel and chrome plated.

Federal Description: "Box Wrench, Double Head, 12-Point, Double Offset Each End," Specs.: GGG-W-00636c., Type 1, Class 2, Style 1. (Nos. 8180-8185) and Style 2 (Nos. 8160-8163).

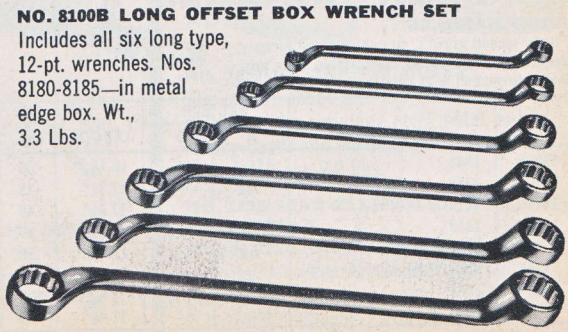
NO. 8100E MIDGET OFFSET BOX WRENCH SET

Includes all four midget wrenches, in metal edge box. Nos. 8112-8127. Wt., .12 Lb.



NO. 8100B LONG OFFSET BOX WRENCH SET

Includes all six long type, 12-pt. wrenches. Nos. 8180-8185—in metal edge box. Wt., 3.3 Lbs.



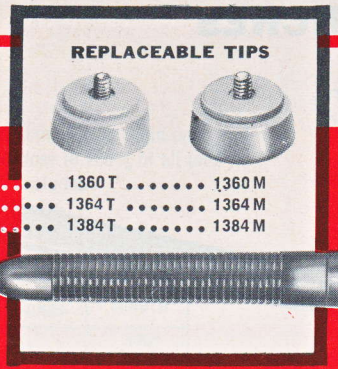
BALL PEIN HAMMERS AND HANDLES

1304 P

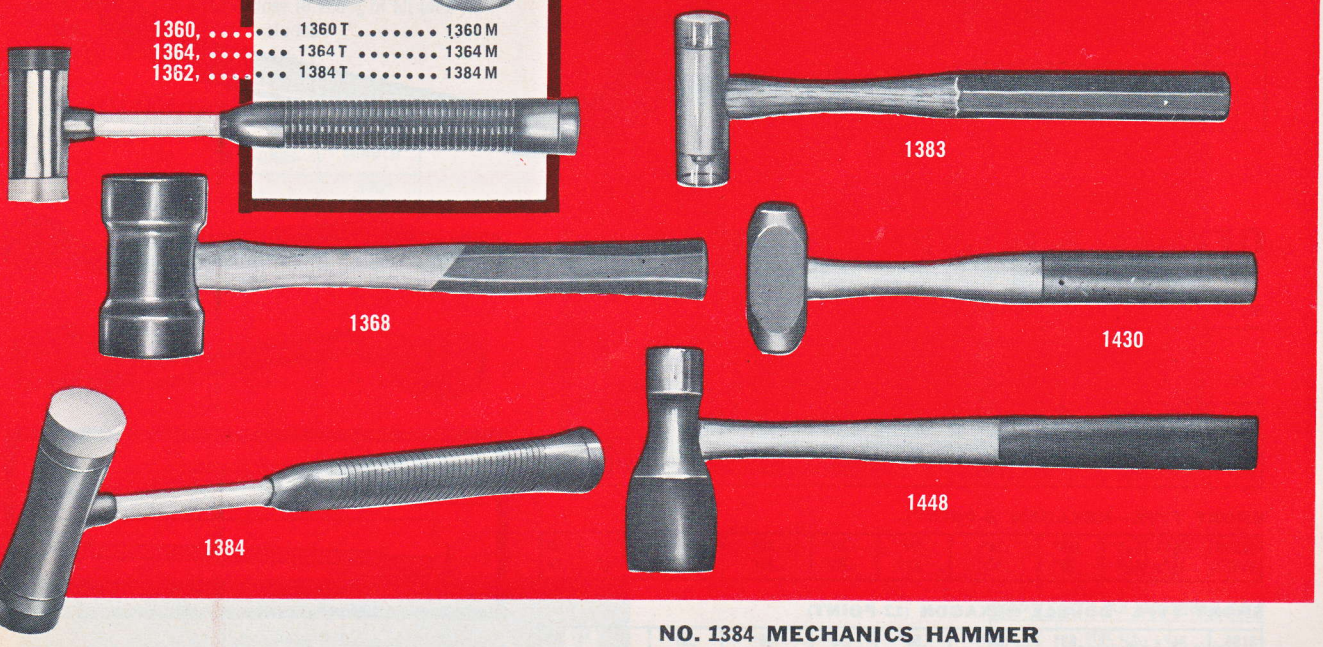
The perfect ball pein for all industries. Accurately balanced. Tough drop-forged head, selectively-hardened face and pein. High grade alloy steel. Polished face, chamfer, cheeks and pein. Fine quality hickory handles. Comfortable octagon shape handle. Clear lacquer finish, plus green lacquer "grip." Full spread of all popular sizes. Like all Proto tools, these hammers are of guaranteed quality, built to do the job faster.

NO.	LENGTH	WT., LBS.	CLASS
1304P	10 ¾″	.40	4 Oz.
1308P	12 3/32″	.62	8 Oz.
1312P	12 ¾″	1.06	12 Oz.
1316P	14 ⅜″	1.40	1 Lb.
1324P	15 ⅝″	1.90	1 ½ Lb.
1332P	15 ⅞″	2.32	2 Lb.
1340P	16″	2.80	2 ½ Lb.

SPECIAL HAMMERS



1360, ... 1360T 1360M
1364, ... 1364T 1364M
1362, ... 1384T 1384M



NO. 1360, 1362, 1364 SOFT FACE HAMMERS

Each hammer has medium and tough plastic tips that won't chip, flake or mushroom. Fiberglas shaft won't rot or split. Zinc head won't fly off. NO. 1360...10 OZ. NO. 1362...16 OZ. NO. 1364...32 OZ. Replaceable Tips, No. M Medium, .04 Lb. No. T Tough, .04 Lb.

NO. 1368 RUBBER MALLET

Soft but tough, non-flaking Neoprene head prevents damage. Ideal for garages, service stations, cabinet shops, etc. Hour-glass design has 2 ⅝″ faces. Weight, 1.46 Lbs. No. 1368H Spare Handle.

NO. 1383 PLASTIC-TIP HAMMER

With replaceable 1 5/16″ round tips of tough amber plastic. Weight, .76 Lb. Spare Tip No. 1370C. No. 1370H Spare Handle.

NO. 1384 MECHANICS HAMMER

Light weight plastic soft-face hammer for light work. No-mar replaceable tips—tough, non-sparking. Shot-loaded head adds 30% more power, reduces rebound and worker fatigue. Fiberglas shaft, plastic grip. Weight, .66 Lbs. Spare Tips—No. 1384M (Medium) No. 1384T (Tough).

NO. 1430 BRASS HAMMER

1 ½ lb. head, all-purpose non-marring hammer for bushings, gears, transmission work, etc. Tapered head for good clearance minimizes mushrooming. Weight, 1.84 Lbs. No. 1430H Spare Handle.

NO. 1448 TWO-WAY HAMMER

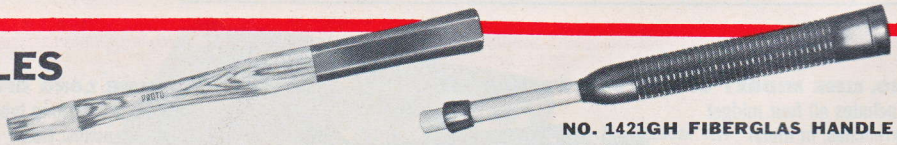
Forged steel head and replaceable rubber head. Ideal for mounting tires, drawing rivets and many other jobs. Weight, 2.6 Lbs. No. 1448B Spare Rubber Head. No. 1416H Spare Handle.

HAMMER HANDLES

WOOD HANDLES

Tough, second growth, straight-grained hickory, shaped and finished for comfortable, sure grip. Wedge furnished with handle.

NO.	FOR HAMMERS	EYE SIZE A	EYE SIZE B	LENGTH	WT., LBS.
1368H	1368	15/32″	⅞″	16 1/16″	.39
1370H	1383	17/32″	Diam.	12 ¼″	.23
1416H	1416 & 1448	⅝″	1″	17 ⅜″	.48
1419H	1419	11/32″	11/16″	11 ⅛″	.17
1424H	1424 & 1427	11/32″	11/16″	13 ⅛″	.18
1426H	1421, 1425, 1426 & 1428	13/32″	13/16″	13″	.22
1429H	1429	⅜″	11/16″	17 ⅜″	.30
1430H	1430	15/32″	⅞″	11 ¾″	.39

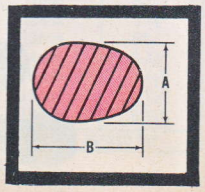


NO. 1421GH FIBERGLAS HANDLE

Including handle, resin, catalyst, mixing stick, instruction sheet, in metal edge box.

WOOD HANDLES

NO.	FOR HAMMERS	EYE SIZE A	EYE SIZE B	LENGTH	WT., LBS.
1304PH	1304P	13/32″	39/64″	11 ½″	.15
1308PH	1308P	15/32″	49/64″	12 ½″	.25
1312PH	1312P	½″	27/32″	13 ½″	.25
1316PH	1316P	17/32″	27/32″	15″	.30
1324PH	1324P	21/32″	1″	16 ¼″	.40
1332PH	1332P	21/32″	1″	16 ¼″	.42
1340PH	1340	23/32″	1 3/32″	16 ¾″	.50



BODY AND FENDER HAMMERS

Federal Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NOS. 1421G, 1424G, 1425G, 1426G, 1427G, 1428G AUTOMOTIVE HAMMERS WITH FIBERGLAS HANDLES.
(For Spare Handles See Page 24)

Fused with high quality polyester resins, glass fibers are molded parallel for the full length of the hammer shaft to give maximum strength where most needed. Many times tougher than wood. Fiberglas withstands corrosion better than wood or steel. Molded cushion-grip handle. Length and weight approximates that of wooden handle hammers.

These hammers are forged from special alloy steel and are designed to speed and simplify repairs. They have good balance, highly polished faces, and proper weight and clearances. Handles (listed on Page 24) are of tough second growth hickory.

NO. 1419 MAGNETIC UPHOLSTERERS HAMMER
A favorite because of its long reach and head radii. The head is curved in the arc of a natural swing. Length of head, 5 ¾". Weight, .57 Lb. No. 1419H—Spare Handle.

NO. 1421 DINGING HAMMER
Has large face for roughing the bad ones into shape for finishing. Head is 6" long, with 1 ¼" and 1 ⅝" round faces. Faces are slightly crowned. Weight, 1.00 Lb. No. 1426H —Spare Handle.

NO. 1424 FINISHING HAMMER
Light in weight and perfectly balanced. Has slightly crowned 1 ¼"-diameter round face, and a 1 1/16" square face. Weight, .64 Lb. No. 1424H—Spare Handle.

NO. 1425 FINISHING HAMMER
Heavier than 1424. Has slightly crowned 1 ½"-diameter round face, and a 1 ⅛" square face. Weight, .90 Lb. No. 1426H—Spare Handle.

NO. 1426 LONG BODY FINISHING HAMMER
For crowned fenders and other places where clearance is needed. Has slightly crowned 1 ⅜"-diameter round face with 3 ½" clearance, and a round cross pein, 1 ⅛" wide, with 4" clearance. Weight, 1.03 Lbs. No. 1426H—Spare Handle.

NO. 1427 FINISHING HAMMER
Has wedge shaped 1"-wide cross pein with 2 ½" clearance. Used for fender beads, corner along panel beading, etc. Has slightly crowned 1 ⅜" round face with clearance of 2". Weight, .70 Lb. No. 1424H—Spare Handle.

NO. 1428 PECKING HAMMER
Has pointed end for picking out small dents and a round face for finishing. Head is 5 ⅞" long overall. Slightly crowned round face is 1 ½" in diameter. Weight, .86 Lb. No. 1426H —Spare Handle.

NO. 1429 PECKING HAMMER
Eliminates uncomfortable reaching. Handle, 17 ⅜", reaches to center of top. Head is 9" long overall. This hammer combines a long curved pecking point with a long-necked round pein. Weight, .88 Lb. No. 1429H—Spare Handle.

BODY AND FENDER TOOLS

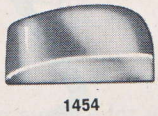
All dollies are forged of alloy steel, hardened, tempered, highly polished on working surfaces, maintaining smooth surfaces over long periods of time, even with hard daily use.

1452

1453

NO. 1452 EGG-SHAPED DOLLY
A very useful and popular shape, with a great many different curves and angles. Size, 1 ⅝"x2 ½"x3 ¾". Weight, 3.1 Lbs.

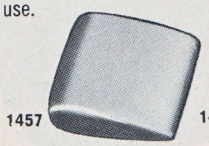
NO. 1453 RAILROAD OR GENERAL PURPOSE DOLLY
Has a large variety of radii, perfect hand fit, thin beading edge, and 7½ square inches on largest face. Heavy weight is ideal for bumping out dents. Size, 2 ⅜"x2 ¾"x2 31/32". Weight, 2.9 Lbs.

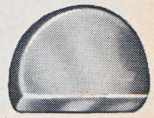

1454

1455

NO. 1454 RADIUS DOLLY
Useful design, with many radii. One side and bottom are flat for dinging flat surfaces. Both ends high crowned. Size, 1 9/32"x2 3/16"x4 ½". Weight, 2 9 Lbs.

NO. 1455 BEAD DOLLY
Another popular dolly, used for beads or flanges on fenders. Flat side works under long curve of fender. Thin edge is useful for corners and beading. Size, 1 ⅞"x2 29/32"x 4 7/16". Weight, 2.4 Lbs.


1457


1458

NO. 1457 SHRINKING DOLLY
The unique shape and low crown make this dolly ideal for shrinking body metal, and for raising beads and molding. Size, 1 ¼"x3 1/16" x3 5/16". Weight, 2.2 Lbs.

NO. 1458 SEMI-ELLIPTICAL HEEL DOLLY
Provides two flat and two crowned working surfaces. Very useful in restricted places. Suitable for shrinking metal. Size, 1 3/16"x 2 ⅜"x3 ¼". Weight, 2.2 Lbs.

BODY AND FENDER TOOLS [CONT.]

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

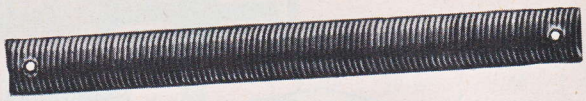
WOOD PADDLES FOR MAKING SOLDER FILLS

Three differently shaped and specially designed paddles. The select kiln-dried hardwood used is highly resistant to charring, and it is treated by a special process to provide the peculiar qualities necessary for the smooth spreading of solder.

NO.	WORKING AREA	LENGTH	WT., LB.
1411	Flat, 1 1/16"x3 1/4"	7 3/4"	.11
1412	Curved, 1 1/16"x3 1/4"	7 3/4"	.09
1413	Flat, 1"x3 1/4"	7 3/4"	.09

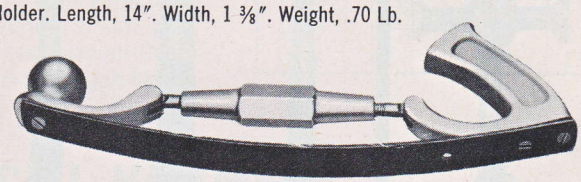
NO. 1400SP SOLDER PADDLE SET

Includes the solder paddles listed above—Nos. 1411, 1412 and 1413. In metal edge box. Weight, .40 Lb.



NO. 1501 FLEXIBLE FLAT STRAIGHT FILE

Fast cutting type for all kinds of body, fender and sheet metal work. Has curved teeth on both sides. 7 teeth to inch. Use with 1509 Holder. Length, 14". Width, 1 3/8". Weight, .70 Lb.



NO. 1509 ADJUSTABLE FILE HOLDER

Made of aluminum, this fender file holder is light but strong. Simple adjustment makes file convex, concave or flat. For use with 1501 File. Length, 16". Weight, 1.86 Lbs.

BARS

CONVENTIONAL-TYPE PRY BARS

For countless prying and aligning jobs. Forged from special alloy steel and correctly heat treated for extra strength.

NO.	STOCK	LENGTH	WT., LBS.
2116	1/2" Hexagon	16"	.72
2120	19/32" Hexagon	18"	1.20
2124	23/32" Hexagon	24"	2.4
2125	7/8" Hexagon	29 3/4"	4.70

Fedl. Description: "Pry bar (rolling head)." Specs. (No. 2126): GGG-B-101b. Type IV.

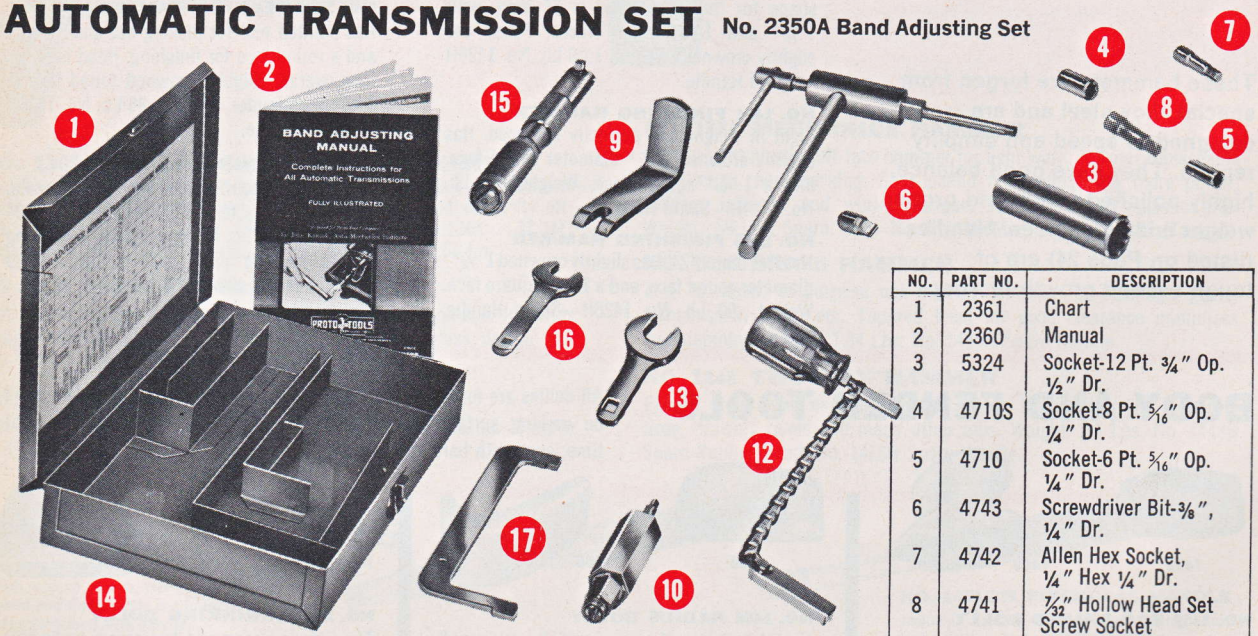
ROLLING HEAD BARS

New type gear bar, with 90° rolling head. One of the handiest types of bars you can own, having a great many uses. Especially valuable for getting into close places, such as behind gears. Forged from alloy steel.

NO.	STOCK	LENGTH	WT., LBS.
2126	1/2" Hexagon	16"	.88
2130	19/32" Hexagon	18"	1.54

AUTOMATIC TRANSMISSION SET

No. 2350A Band Adjusting Set

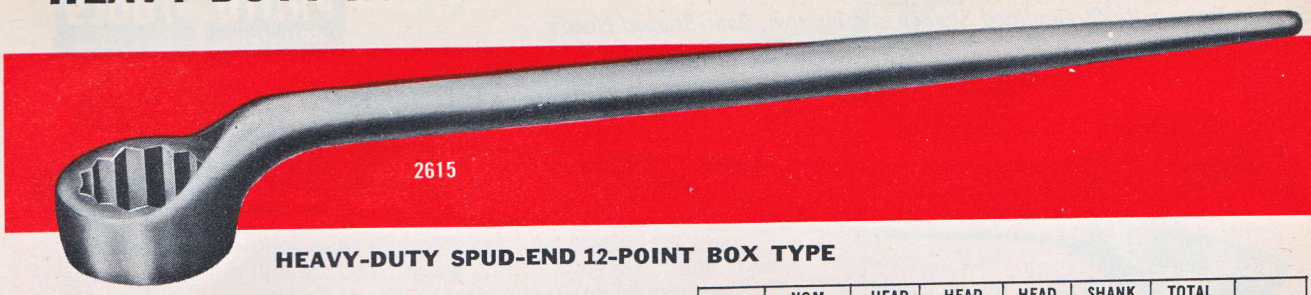


NO.	PART NO.	DESCRIPTION
1	2361	Chart
2	2360	Manual
3	5324	Socket-12 Pt. 3/4" Op. 1/2" Dr.
4	4710S	Socket-8 Pt. 5/16" Op. 1/4" Dr.
5	4710	Socket-6 Pt. 5/16" Op. 1/4" Dr.
6	4743	Screwdriver Bit-3/8", 1/4" Dr.
7	4742	Allen Hex Socket, 1/4" Hex 1/4" Dr.
8	4741	7/32" Hollow Head Set Screw Socket
9	2353	1/4" Gauge
10	2354	Servo Gauge-Front
11	2357	Band Adjuster
12	2359	Handle & 1/4" Gauge 1/4" Dr.
13	2356	5/8" O.E. Wrench
14	9973	Metal Box
15	6061	Torque Wrench, 1/4" Dr.
16	2352	9/16" O.E. Wrench
17	2355	Servo Gauge-Rear

Proto's universal band adjusting set provides all the special tools needed to adjust the bands on all automatic transmissions for autos and light trucks.

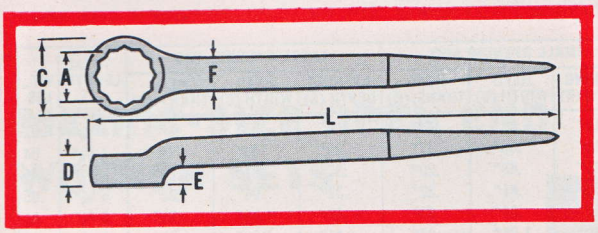
Easy-to-follow instruction manual and copyrighted chart give optional specifications for all transmissions. **Manual** clearly shows each step and explains in easy-to-understand terms the proper procedure. **Chart** is for fast reference on torque specs, number of back-off turns for each year and model. With Proto's universal set of special tools anyone with a fundamental knowledge of mechanics can easily and quickly adjust the bands on any automatic tranmission. Includes Proto's exclusive Torquer—faster, easier to use, even in the dark. Torquer may be used on many other applications such as the torquing of valve bodies in transmission overhauls, etc.

HEAVY-DUTY INDUSTRIAL WRENCHES



HEAVY-DUTY SPUD-END 12-POINT BOX TYPE

Fedl. Description: "Structural Wrench, Offset Handle, Box, 12-Pt., Single Head." Specs.: GGG-W-00636c., Type IX, Class 2. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.

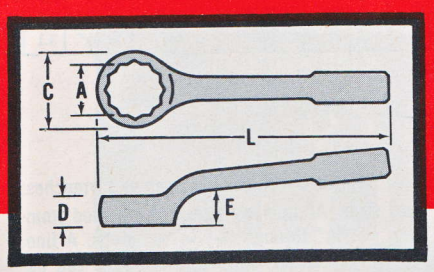


These wrenches are ideal for construction, refineries, etc. You will note the innovation of a *box* end in this wrench, a real safety factor. Makes quick work of loosening frozen or rusted bolts or nuts. The spud end is very handy for aligning holes in flanges. Note the clearance provided by the offset head which overcomes the usual clearance problems. Forged from alloy steel, they are extra strong. Parco-Lubrite finish protects them from rust.

NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THICK-NESS (D)	HEAD OFFSET (E)	SHANK DIAM-ETER (F)	TOTAL LGTH. (L)	WT., LBS.
2615	1 5/16"	1.34"	.63"	1.09"	.69"	14 1/2"	1.13
2617	1 1/16"	1.56"	.69"	.94"	.75"	15 5/8"	1.30
2618	1 1/8"	1.59"	.69"	.94"	.75"	16 1/4"	1.94
2620	1 1/4"	1.78"	.81"	1.06"	.75"	17"	2.2
2623	1 7/16"	2.13"	.94"	1.37"	.87"	19"	3.0
2624	1 1/2"	2.19"	1.00"	1.50"	.87"	20 1/8"	3.3
2626	1 5/8"	2.47"	1.13"	1.50"	.87"	21 1/4"	3.6
2627	1 11/16"	2.47"	1.13"	1.50"	.87"	22 1/4"	3.7
2629	1 13/16"	2.66"	1.19"	1.56"	1.00"	23 1/4"	5.5
2630	1 7/8"	2.84"	1.25"	1.66"	1.00"	24 1/4"	5.6
2632	2"	2.84"	1.25"	1.66"	1.00"	24 1/4"	6.0
2635	2 3/16"	3.13"	1.38"	1.87"	1.00"	26"	6.4
2638	2 3/8"	3.38"	1.50"	2.00"	1.00"	26 3/4"	7.0
2641	2 9/16"	4.00"	1.50"	2.25"	1.06"	28"	8.7
2644	2 3/4"	4.00"	1.50"	2.25"	1.12"	29"	8.2
2647	2 15/16"	4.44"	1.88"	2.62"	1.19"	29 3/4"	12
2650	3 1/8"	4.44"	1.88"	2.62"	1.19"	30"	11

NOTE: Special Sizes are Available from Proto Contract Dept.

NOTE: See page 18 for other Heavy Duty wrenches



An Original Development by PROTO

STRIKING WRENCHES, 12-POINT BOX TYPE

Federal Description: "Striking Wrench, 12-Point Box. Specs.: GGG-W-00636c., Type XII. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NOTE: See page 18 for other heavy duty wrenches.

Striking wrenches have a square striking surface for use with a sledge or hammer. They are offset to allow maximum clearance. These wrenches are necessary for use on large bolts and nuts in restricted quarters. Like all of the heavy-duty Proto industrial wrenches, they are noted for their great strength, being forged from Proto-specified alloy steels. Although strong enough for extra heavy duty, they are streamlined to reduce unnecessary weight. Rust protection is by Parco-Lubrite finish.

NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THICK-NESS (D)	HEAD OFFSET (E)	TOTAL LGTH. (L)	WT., LBS.
2617SW	1 1/16"	1.59"	.63"	.94"	8 1/2"	1.70
2618SW	1 1/8"	1.59"	.63"	.94"	8 1/2"	1.60
2620SW	1 1/4"	1.88"	.81"	1.19"	10 3/4"	3.2
2621SW	1 5/16"	1.88"	.81"	1.19"	10 3/4"	3.0
2623SW	1 7/16"	2.19"	1.00"	1.50"	12"	4.7
2624SW	1 1/2"	2.19"	1.00"	1.50"	12"	4.4
2626SW	1 5/8"	2.41"	1.13"	1.50"	12 1/4"	4.6
2627SW	1 11/16"	2.41"	1.13"	1.50"	12 1/4"	4.5
2629SW	1 13/16"	2.66"	1.19"	1.56"	13 7/16"	6.6
2630SW	1 7/8"	2.84"	1.25"	1.66"	13 7/16"	6.8
2632SW	2"	2.84"	1.25"	1.66"	13 7/16"	6.6
2635SW	2 3/16"	3.38"	1.50"	2.00"	13 7/8"	8.2
2638SW	2 3/8"	3.38"	1.50"	2.00"	13 7/8"	7.8
2641SW	2 9/16"	4.00"	1.50"	2.25"	13 7/8"	8.7
2644SW	2 3/4"	4.00"	1.50"	2.25"	13 7/8"	8.2
2647SW	2 15/16"	4.44"	1.88"	2.62"	16"	13
2650SW	3 1/8"	4.44"	1.88"	2.62"	16"	12

NOTE: Special Sizes are Available from Proto Contract Dept.

NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

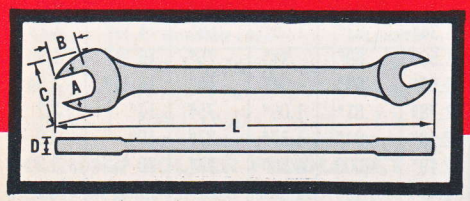
OPEN END WRENCHES 15° Angle

Speedy Type—with Streamlined Shanks and Narrow, Pear-Shaped Heads

PROTO TOOLS PROFESSIONAL QUALITY TOOLS

Fedl. Description: "Engineer's Wrench, Double Head, Open End, 15°." Specs.: GGG-W-00636c., Type IV. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

3016-3070



Slim, scientifically tapered jaws reduce overall width of the pear-shaped heads to permit work in close places but are extra strong at points of greatest strain. Jaws have minimum overhang to speed seating on nut, increase strength and prevent jaw spreading. Opening bases have a radius determined for high strength. Heads have the correct thickness. Heads project from shank at 15° angle, permitting full rotation of a hex nut within only a 30° arc. Streamlined shanks are easy on hands, speed work and enhance appearance. Great strength and toughness—giving extra life— result from use of PROTOLOY® special alloy steels, scientific grain-flow forging, and correct heat treatment. Chrome plating gives rust-proof, lustrous-appearing wrenches.

® Registered U.S. Pat. Off.

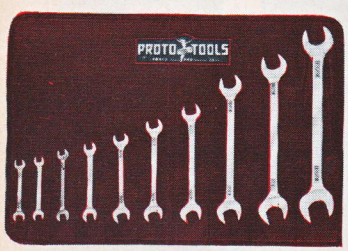
NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END			LARGE OPENING END			TOTAL LENGTH (L)	WT., LBS.
		OPENING DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)	OPENING DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)		
3016	3/16" x 1/4"	.19"	.47"	.17"	.19"	.53"	.17"	4 1/8"	.02
3018	1/4" x 5/16"	.19"	.56"	.17"	.25"	.69"	.17"	4 1/2"	.04
3020	5/16" x 3/8"	.25"	.69"	.20"	.31"	.81"	.20"	4 7/8"	.05
3021	3/8" x 7/16"	.31"	.81"	.22"	.37"	.94"	.22"	5 1/4"	.05
3025	7/16" x 1/2"	.31"	.94"	.25"	.37"	1.06"	.25"	5 5/8"	.10
3026	1/2" x 9/16"	.41"	1.06"	.27"	.44"	1.22"	.27"	6"	.14
3027	1/2" x 19/32"	.44"	1.06"	.27"	.50"	1.22"	.27"	6 3/8"	.15
3030	9/16" x 5/8"	.44"	1.19"	.30"	.50"	1.31"	.30"	6 3/4"	.23
3031	5/8" x 3/4"	.50"	1.31"	.34"	.62"	1.63"	.34"	7 3/16"	.27
3033	19/32" x 11/16"	.56"	1.31"	.33"	.62"	1.44"	.33"	7 5/8"	.26
3034	5/8" x 11/16"	.56"	1.31"	.33"	.62"	1.44"	.33"	8 1/8"	.28
3035	11/16" x 3/4"	.56"	1.44"	.34"	.72"	1.63"	.34"	8 9/16"	.32
3037	11/16" x 25/32"	.56"	1.44"	.34"	.62"	1.63"	.34"	9 1/2"	.42
3039	3/4" x 7/8"	.66"	1.63"	.38"	.72"	1.81"	.38"	10"	.45
3040	13/16" x 7/8"	.75"	1.66"	.38"	.75"	1.81"	.38"	10 1/2"	.51
3041	7/8" x 1 1/16"	.78"	2.00"	.44"	.94"	2.19"	.44"	11 1/8"	.70
3042	7/8" x 15/16"	.88"	1.81"	.41"	.94"	2.00"	.41"	11 1/8"	.68
3045	15/16" x 1"	.72"	2.00"	.44"	.78"	2.19"	.44"	12"	.81
3050	1 1/16" x 1 1/8"	.87"	2.13"	.50"	1.00"	2.38"	.50"	13 7/8"	1.20
3051	1 1/16" x 1 1/4"	.87"	2.25"	.50"	1.12"	2.65"	.50"	14 7/8"	1.42
3055	1 1/4" x 1 5/16"	1.12"	2.56"	.56"	1.19"	2.88"	.56"	16 1/4"	1.76
3060	1 3/8" x 1 7/16"	1.12"	2.75"	.56"	1.25"	3.00"	.56"	17 3/4"	2.3
3061	1 1/4" x 1 7/16"	1.12"	2.75"	.56"	1.25"	3.00"	.56"	17 3/4"	2.3
3065	1 7/16" x 1 5/8"	1.25"	3.00"	.64"	1.62"	3.31"	.64"	19 1/2"	3.0
3070	1 1/2" x 1 5/8"	1.25"	3.00"	.64"	1.62"	3.31"	.64"	19 1/2"	3.1

NOTE: Special Sizes are Available from Proto Contract Dept.

OPEN END WRENCH SETS

No. 3000H SET

An expanded set of ten open end wrenches in 15 different sizes for professional use. All opening sizes are from 1/4" through 1 1/8" in 1/16" steps.



CONTENTS NO. 3000H SET

NO.	OPENING SIZES	LENGTH
3018	1/4" x 5/16"	4 1/2"
3020	5/16" x 3/8"	4 7/8"
3025	7/16" x 1/2"	5 5/8"
3026	1/2" x 9/16"	6"
3030	9/16" x 5/8"	6 3/4"
3031	5/8" x 3/4"	7 3/16"
3035	11/16" x 3/4"	8 9/16"
3040	13/16" x 7/8"	10 1/2"
3045	15/16" x 1"	12"
3050	1 1/16" x 1 1/8"	13 7/8"
2406	Vinyl Kit, 21 1/4" x 15 1/2"	

Weight, 4.6 Lbs.

NO. 3000N SET

This set is very popular because it includes five open end wrenches in the nine most-used sizes. All opening sizes are provided from 3/8" through 7/8" in 1/16" steps. A fine basic set to which more sizes can be added as they are needed.

CONTENTS NO. 3000N SET

NO.	OPENING SIZES	LENGTH
3021	3/8" x 7/16"	5 1/4"
3026	1/2" x 9/16"	6"
3030	9/16" x 5/8"	6 3/4"
3035	11/16" x 3/4"	8 9/16"
3040	13/16" x 7/8"	10 1/2"
2409	Vinyl Kit, 9 1/2" x 11 3/4"	

Weight, 1.72 Lbs.

TAPPET WRENCHES

Open End 15° Angle Heads

Fedl. Description: "Tappet Wrench, Double Spearhead, Open End, 15°." Specs.: GGG-W-00636c., Type X, Class 1. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

Have 10" length which provides good leverage, keeps hands away from hot manifolds, and still permits use in close quarters. Extra-thin heads for close quarters. Wrench openings cover tappets, screws or lock nuts without excessive overhang, making them easier and faster to use. They are forged from fine alloy steel. Chrome finish.

NO.	NOMINAL OPENING SIZES	HEAD THICK-NESS	TOTAL LENGTH	WT., LBS.
3425	7/16" x 1/2"	.188"	10"	.15
3426	1/2" x 9/16"	.188"	10"	.16
3430	9/16" x 5/8"	.188"	10"	.24
3435	11/16" x 3/4"	.218"	10"	.27
3440	13/16" x 7/8"	.218"	10"	.35

CONTENTS NO. 3400G SET

NO.	QUANTITY	OPENING SIZES
3425	1	7/16" x 1/2"
3426	2	1/2" x 9/16"
3430	1	9/16" x 5/8"
2412	Vinyl Kit, 6 3/4" x 11 1/2"	

Weight, 1.02 Lbs.

METRIC-SIZE END WRENCHES

Forged from fine alloy steel and properly heat treated for extra strength and toughness. Openings are accurately machined. The ten wrenches provide all openings from 6 through 24 millimeters by 1-millimeter steps, plus a 26-millimeter opening. Three sets are available—one with all ten open end wrenches, one with six open end wrenches, and one with seven combination wrenches.

NO.	NOMINAL OPENING SIZES, MM.	HEAD THICKNESS, INCHES	LENGTH, INCHES	WT., LBS.
30607	6 x 7	.172	4 ½	.04
30809	8 x 9	.203	4 ⅞	.06
31011	10 x 11	.219	5 ¼	.07
31213	12 x 13	.250	5 ⅝	.12
31415	14 x 15	.296	6 ¾	.23
31617	16 x 17	.328	8 ⅛	.22
31819	18 x 19	.344	8 9/16	.38
32022	20 x 22	.370	10	.60
32123	21 x 23	.370	10 ½	.56
32426	24 x 26	.437	11 ⅛	.78

METRIC-SIZE OPEN END WRENCH SETS

CONTENTS SET NO. 30000A

NO.	OPENING SIZES, MM.	LENGTH, INCHES
30607	6 x 7	4 ½
30809	8 x 9	4 ⅞
31011	10 x 11	5 ¼
31213	12 x 13	5 ⅝
31415	14 x 15	6 ¾
31617	16 x 17	8 ⅛
31819	18 x 19	8 9/16
32022	20 x 22	10
32123	21 x 23	10 ½
32426	24 x 26	11 ⅛
2414	Vinyl Kit	

Weight, 3.4 Lbs.

NO.	OPENING SIZES, MM.	LENGTH, INCHES
30809	8 x 9	4 ⅞
31011	10 x 11	5 ¼
31213	12 x 13	5 ⅝
31415	14 x 15	6 ¾
31617	16 x 17	8 ⅛
31819	18 x 19	8 9/16
2407	Vinyl Kit	

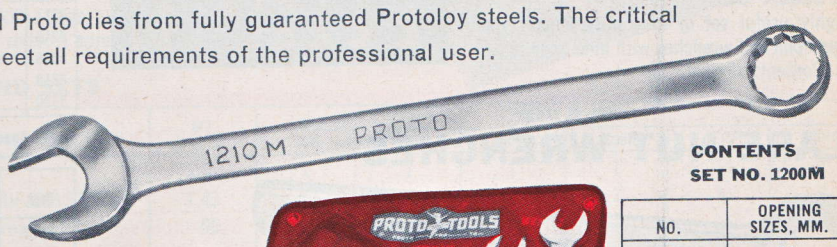
CONTENTS SET NO. 30000R

Weight, 1.20 Lbs.

METRIC COMBINATION WRENCHES

Foreign car tools made on standard Proto dies from fully guaranteed Protoloy steels. The critical openings are exactly broached to meet all requirements of the professional user.

NO.	OPENING SIZES, MM.	LENGTH, INCHES	WT., LBS.
1210M	10	4 ½	.06
1211M	11	5 ¼	.10
1212M	12	5 ¼	.10
1213M	13	6	.14
1214M	14	6 ¾	.20
1215M	15	7 ½	.20
1216M	16	7 ½	.27
1217M	17	8 ¼	.34
1218M	18	8 ¼	.34
1219M	19	9 ¼	.45
1220M	20	10 ¼	.55
1222M	22	11 ¼	.65



Bright red and blue Metric Kit contains seven most used sizes

CONTENTS SET NO. 1200M

NO.	OPENING SIZES, MM.
1211M	11
1212M	12
1213M	13
1214M	14
1216M	16
1217M	17
1219M	19
2404M	Vinyl Kit

MIDGET OPEN END WRENCHES

PROTO TOOLS
PROfessional QUALITY TOols

15° and 60° Angle Heads

3210-3226

Fedl. Description: "Ignition Wrench, Double Head, Open End, 15° and 60° Heads." Specs.: GGG-W-00636c. Type VI, Style 1. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

Two openings on each wrench are duplicated on another wrench but at different head angles. Each pair (See 3210 & 3211, etc.) provides two opening sizes in both 15° and 60° angles. These obstruction wrenches are used on small assemblies, carburetors, distributors, generators, electronic and electrical equipment. Chrome finish. Forged from alloy steel.

NO.	NOMINAL OPENING SIZES 15° END	NOMINAL OPENING SIZES 60° END	HEAD THICK-NESS	LENGTH	WT., LBS.
3210	13/64"	15/64"	7/64"	3"	.02
3211	15/64"	13/64"	7/64"	3"	.02
3215	7/32"	1/4"	7/64"	3"	.02
3216	1/4"	7/32"	7/64"	3"	.02
3220	9/32"	5/16"	5/32"	3 1/2"	.03
3221	5/16"	9/32"	5/32"	3 1/2"	.03
3225	11/32"	3/8"	5/32"	3 3/4"	.04
3226	3/8"	11/32"	5/32"	3 3/4"	.04

NOTE: Special Sizes are Available from Proto Contract Dept.

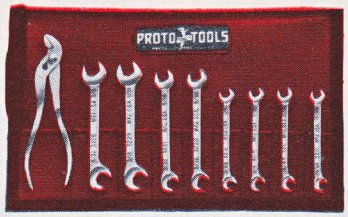
NO. 3200B SET

A handy set of four obstruction-type wrenches with eight opening sizes, plus a midget plier.

CONTENTS OF NO. 3200B SET

NO.	OPEN. SIZES	LGTH.
3210	13/64" x 15/64"	3"
3215	7/32" x 1/4"	3"
3220	9/32" x 5/16"	3 1/2"
3225	11/32" x 3/8"	3 3/4"
235	Midget Plier	
2417	Vinyl Kit	

Weight, .28 Lb.



NO. 3200D SET

A master set of all eight midget obstruction-type open end wrenches and a midget ignition plier.

CONTENTS OF NO. 3200D SET

NO.	OPEN. SIZES	LGTH.
3210	13/64" x 15/64"	3
3211	15/64" x 13/64"	3"
3215	7/32" x 1/4"	3"
3216	1/4" x 7/32"	3"
3220	9/32" x 5/16"	3 1/2"
3221	5/16" x 9/32"	3 1/2"
3225	11/32" x 3/8"	3 3/4"
3226	3/8" x 11/32"	3 3/4"
235	Midget Plier	
2416	Vinyl Kit	

Weight, .40 Lb.

NO. 3200C IGNITION SET

All precision tools necessary for fine auto and marine tune-up. Handsome red and blue Vinyl fabric kit may be rolled or hung.

CONTENTS OF NO. 3200C SET

000-D	Ignition Gauge Set
281P	Plier
2302	Point File-5"
3210	Wrench 13/64" x 15/64"
3211	Wrench 15/64" x 13/64"
3215	Wrench 7/32" x 1/4"
3216	Wrench 1/4" x 7/32"
3220	Wrench 9/32" x 5/16"
3221	Wrench 5/16" x 9/32"
3225	Wrench 11/32" x 3/8"
3226	Wrench 3/8" x 11/32"
9822	Screw Driver
9853	Screw Starter
2420	Vinyl Kit

Weight, .50 lb.

3314-3340

Fedl. Description: "Ignition Wrench, Double Head, Open End, 15° and 80° Heads." Specs.: GGG-W-00636c. Type VI, Style 2. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

15° AND 80° ANGLE HEADS

Both openings of these wrenches are the same size. 15° and 80° angle heads are needed for delicate adjustments on distributors, generators, electronic equipment, etc. For hard to reach bolts and nuts. All sizes have narrow shanks and small fillet radii forged from alloy steel. Chrome plated.

NO. 3300A SET

A highly useful set of nine obstruction-type midget open end wrenches with nine opening sizes. Contents at right.

NO.	NOMINAL OPENING SIZE BOTH ENDS	HEAD THICK-NESS	LENGTH	WT., LBS.
3314	7/32"	7/64"	3 1/4"	.02
3315	15/64"	7/64"	3 1/4"	.02
3316	1/4"	7/64"	3 1/4"	.02
3318	9/32"	5/32"	3 5/8"	.03
3320	5/16"	5/32"	3 5/8"	.03
3322	11/32"	5/32"	4"	.04
3324	3/8"	5/32"	4"	.04
3328	7/16"	11/64"	4 3/4"	.07
3332	1/2"	11/64"	4 3/4"	.07
3336	9/16"	3/16"	5 3/4"	.14
3340	5/8"	3/16"	5 3/4"	.12

CONTENTS OF 3300A

NO.	OPEN. SIZES	LGTH.
3314	7/32"	3 1/4"
3315	15/64"	3 1/4"
3316	1/4"	3 1/4"
3318	9/32"	3 5/8"
3320	5/16"	3 5/8"
3322	11/32"	4"
3324	3/8"	4"
3328	7/16"	4 3/4"
3332	1/2"	4 3/4"
2410	Vinyl Kit	

Weight, .42 Lb.

NOTE: Special Sizes are Available from Proto Contract Dept.

FLARE NUT WRENCHES

3712

Fedl. Description: "Flare Nut Wrench, Single Head, Modified 12-Point." Specs.: GGG-W-00636c, Type XIV. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

Meet rigid requirements of U.S. Navy and Air Force. For assembly and repair of fluid and gas lines on hydraulic units, air brake systems, compressors, instruments, etc. Nine gripping points and deep walls prevent slippage and distortion of soft metal fittings. Forged from special alloy steel and chrome plated.

For standard nut and bolt sizes, corresponding to nominal wrench openings, see page 76.

NO.	OPEN-ING	HEAD SLOT	HEAD THKNS.	LGTH.	WT., LBS.
3712	3/8"	9/32"	5/16"	6 1/4"	.23
3714	7/16"	11/32"	11/32"	6 3/8"	.22
3716	1/2"	3/8"	7/16"	6 1/2"	.24
3718	9/16"	7/16"	7/16"	6 5/8"	.23
3720	5/8"	1/2"	7/16"	6 3/4"	.32
3724	3/4"	5/8"	9/16"	7"	.38
3728	7/8"	11/16"	5/8"	7 1/4"	.48
3730	15/16"	3/4"	5/8"	7 3/8"	.46
3732	1"	3/4"	11/16"	7 1/2"	.58
3734	1 1/16"	13/16"	3/4"	7 5/8"	.56
3736	1 1/8"	7/8"	25/32"	7 3/4"	.66

NOTE: Special Sizes are Available from Proto Contract Dept.

PULLERS

Fedl. Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

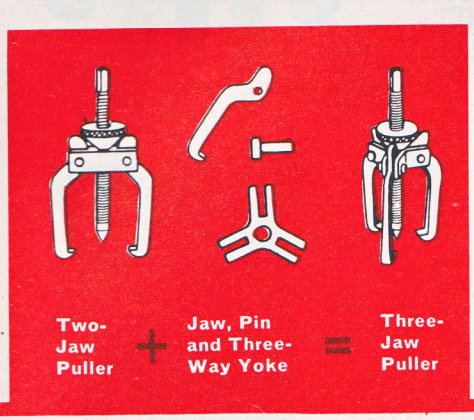
You Can Do More Jobs with Proto's Fewer Puller Parts

Many puller lines require an enormous investment in special pullers for all different types of jobs. *PROTO pullers have interchangeable parts. You do all jobs, with fewer parts, for less cost.*

For example, a light-duty two-jaw puller can be converted into a three-jaw type by adding a three-way yoke, pin and jaw.

A two-jaw or three-jaw light-duty puller can be quickly changed to a slide-hammer type by replacing the screw with a T-handled rod and hammer. Likewise, the slide-hammer puller can be converted to a light-duty type by adding one screw.

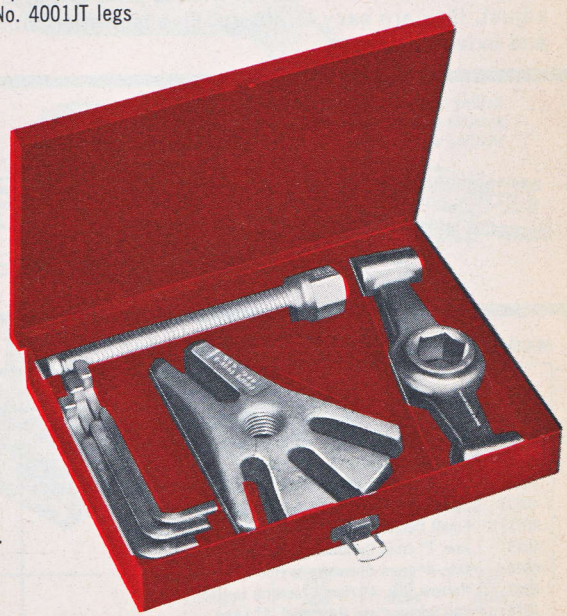
This same screw is used in PROTO medium-duty pullers, so a light-duty puller can be changed to a medium-duty type by adding a crossarm and two jaws. Regular heavy-duty jaws can be replaced by cap screw or timing gear jaws. All of these jaws are for inside or outside pulling.



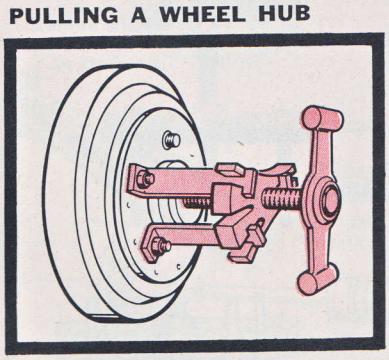
UNIVERSAL WHEEL HUB PULLERS

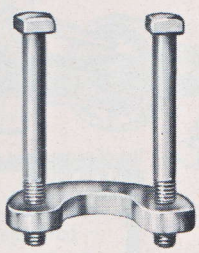
The simplest and fastest made for hubs and many other pulling requirements. It pulls hubs of most light trucks and cars. The No. 4001J legs are drilled for 5/16" studs and are quickly adjustable to any drum with 3, 4, 5, 6 or 7 studs in a circle up to 6½" diameter. The No. 4001JT legs accommodate larger ¾" studs and are adjustable on drums in a circle up to 8" diameter. The fastest, easiest manual wheel puller made for hubs without flanges on all Chrysler cars, Studebaker, Packard, Hudson and other cars and light trucks.

Universal Wheel Puller Set No. 4001G with Striking Wrench Attachment.



PULLING A WHEEL HUB





Adapter ring 4001R and two 4001C cap screws permit pulling hubs of 1948 and older Fords.

Assembly of 4001S Screw, 4001B Body, three 4001J Legs, and 4001W Striking Wrench. Detachable Tip 4001ST keeps screw on center, reduces spreading or splitting of axles.

WHEEL HUB PULLER PARTS AND SETS

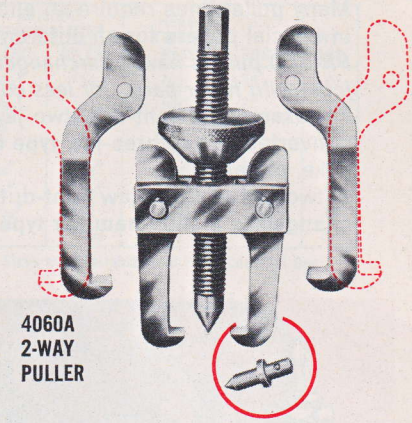
NO.	DESCRIPTION	WT. LBS.	PARTS IN SET					
			4001	4001A	4000D	4000E	4001F	4001G
4001B	Puller Body, 6¾" Long	3.6	1	1	1	1	1	1
4001S	1" Puller Screw, 8" Long, with 4001ST Tip	1.43	1	1	1	1	1	1
4001ST	Detachable Tip for 4001S Screw	.06	..	..	..	..	..	..
4001J	Leg— 1 5/16" Leg Offset to Clear Hubs, 3⅞" from Crossarm to Offset	1.00	3	3	3	3	3	3
4001JT	Leg—1¾" Leg Offset to Clear Hubs, 3⅞" from Crossarm to Offset	1.00	..	..	..	..	..	..
4001R	Older Ford Adapter Ring	.64	1	1	..	..	..	..
4001C	Older Ford Adapter Cap Screw, 4½" Long	.38	2	2	..	..	..	..
4001W	Striking Wrench	2.0	..	..	..	..	1	1
4001T	Steel Box, 10¾" x 8¼" x 1¾"	2.2	..	1	..	1	..	1
	SET WEIGHT, LBS.		9.43	11.63	8.03	10.23	10.7	12.23

LIGHT-DUTY PULLERS

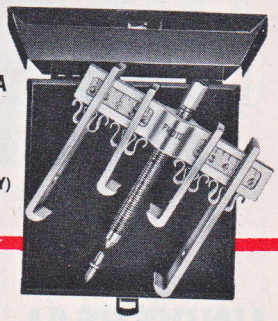
Fedl. Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin 5918.

These small pullers are designed to pull little gears, pulleys, bearings, etc., quickly and easily. The numerous applications for light-duty pullers include repairs of electric motors, refrigerators, other household appliances, oil pumps, starters, generators, etc. The narrow jaws get into very close places. Adjusting nut No. 4063 holds the jaws firmly in position so they can't slip. If adjusting nut No. 4056N is substituted, the short jaws can be reversed and used for inside pulling. Any ½" opening wrench can be used on the screw's hex. head. Two two-way and two three-way puller sets are available. Parts included in these sets are shown in the right columns of the table below.

4070C
3-WAY PULLER



4060A
2-WAY
PULLER



SET 4020 A
(WITH BOX)

SET 4020B
(TOOLS ONLY)

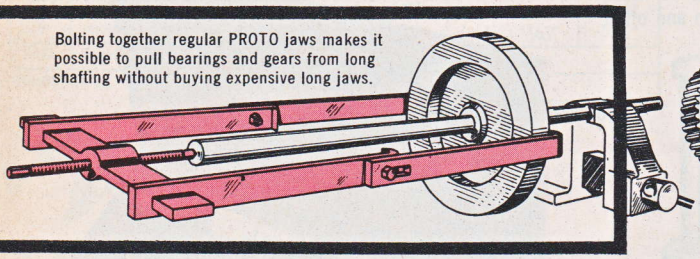
LIGHT-DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.	2-WAY SETS		3-WAY SETS	
			4060A PARTS	4060E PARTS	4070C PARTS	4070E PARTS
4022	Screw, 6 ¾" Long, ½" Hex. Head, with 4022T & 4022TS Tips	.35	1	1	1	1
4022T	Standard Detachable Tip for 4022 Screw, 60° Taper	.03	..	..	..	..
4022TS	Small Detachable Tip for 4022 Screw, ¼" Diameter	.02	..	..	..	..
4063	Knurled Non-Reversible Adjusting Nut, 1 ¾" Diameter	.28	1	1	1	1
4056N	Knurled Reversible Adjusting Nut, 2 ½" Diameter	.75	..	..	..	..
4061	Yoke, 2 ½" Wide, for Holding Two Jaws	.23	1	1	..	..
4071	Yoke, 2 ½" Diameter, for Holding Three Jaws	.32	..	..	1	1
4056PN	Pin for Holding Jaw in Yoke, Held in Place by Ball Check	.03	2	2	3	3
4056J	Reversible Jaw, 3 ½" Long, 2" Yoke to Hook, 1 5/32"-4 ⅛" Inside Range, 0"-2 9/16" Outside Range	.11	2	2	..	..
4066	Outside Jaw, 4 19/32" Long, 3" Yoke to Hook, 0"-5 3/16" Range	.21	2	..	3	..
4067	Long Outside Jaw, 7 23/32", L., 6 ⅛" Yoke to Hook, 0"-8 ¾" Range	.30	..	2	..	3
	Set Weight, Lbs.		1.56	1.70	1.67	1.94

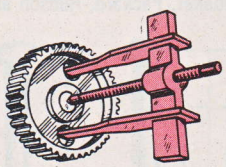
All Jaws That Can Be Used with Light-Duty Pullers Are Illustrated on Page 33

MEDIUM AND HEAVY-DUTY PULLERS

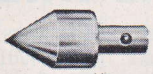
Provide straight line pulling for all types of bearings, sprockets, gears, pulleys, wheels, hubs, etc. Springs hold quick-change jaws securely on crossarm, which is marked to show the inches jaws are apart. With no linkage or pins to adjust, they are easy to set up. Five jaws have hole for bolting together and extending reach.



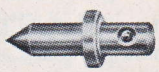
Bolting together regular PROTO jaws makes it possible to pull bearings and gears from long shafting without buying expensive long jaws.



Use of narrow jaws on gear with cut-out sections.

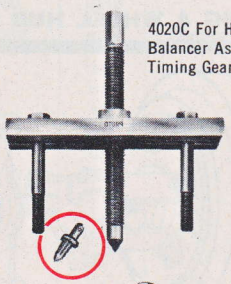


4022T



4022TS

Detachable "live center" screw tips do not rotate when a screw is turned, preventing shaft damage, keeping screw on center, relieving screw strain and retaining better alignment.

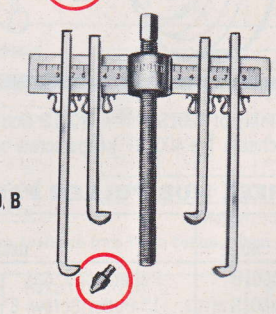


4020C For Harmonic Balancer Assemblies, Timing Gears, etc.

4020 C

MEDIUM-DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.	PARTS IN SET 4020A	PARTS IN SET 4020B	PARTS IN SET 4020C
4021	Crossarm, 7" Long, with Jaw-Positioning Guide	1.00	1	1	..
4021S	Spring for Jaws 4025, 4026 and 4027	.01	4	4	..
4056C	Cap Screw Crossarm, 6" Wide	1.10	..	..	1
4022	Screw, 6 ¾" Long, ½" Hex. Head, with 4022T & 4022TS Tips	.35	1	1	1
4022T	Standard Detachable Tip for 4022 Screw, 60° Taper	.03	..	..	..
4022TS	Small Detachable Tip for 4022 Screw, ¼" Diameter	.02	..	..	..
*4025	Jaw, 2" from Crossarm to Hook	.33	2	2	..
*4026	Jaw, 4" from Crossarm to Hook	.50	2	2	..
4027	Narrow Jaw, 4" from Crossarm to Hook	.35	..	..	..
4028	Cap Screw, Case Hardened, 3" Long	.10	..	..	2
4029	Steel Box, 7" x 7" x 1 ¼"	1.74	1	..	..
	Set Weight, Lbs.		4.79	3.05	1.65

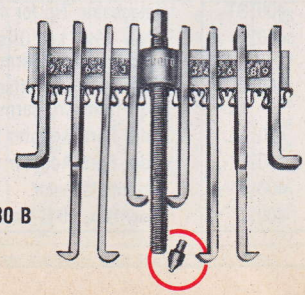


4010 B

HEAVY-DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.	PARTS IN SET 4010B	PARTS IN SET 4010C	PARTS IN SET 4030A	PARTS IN SET 4030B
4011	Crossarm, 11" Long, with Jaw-Positioning Guide	2.7	1	1	1	1
4011S	Spring for Jaws 4015, 4016, 4017 and 4018	.02	4	4	8	8
4012	Screw, 11 7/16" Long, ⅝" Hexagon Head, with 4012T Tip	1.20	1	1	1	1
*4012T	Standard Detachable Tip for 4012 Screw, 60° Taper	.06	..	..	..	..
*4015	Jaw, 4 ¾" from Crossarm to Hook	.94	2	2	2	2
*4016	Jaw, 7 3/16" from Crossarm to Hook	1.26	2	..	2	2
4017	Timing Gear Jaw, 7 3/16" from Crossarm to Hook	1.14	..	..	2	2
*4018	Cap Screw Jaw, 3" from Crossarm to Hook	.88	..	2	2	2
4019	Steel Box, 11 ⅛" x 11 ¾" x 1 ¾"	4.1	..	..	1	..
	Set Weight, Lbs.		8.38	7.62	16.60	12.50

* Has Extra Hole Near Hook for Bolting Jaws Together, Which Saves Buying Expensive Long-Reach Jaws.

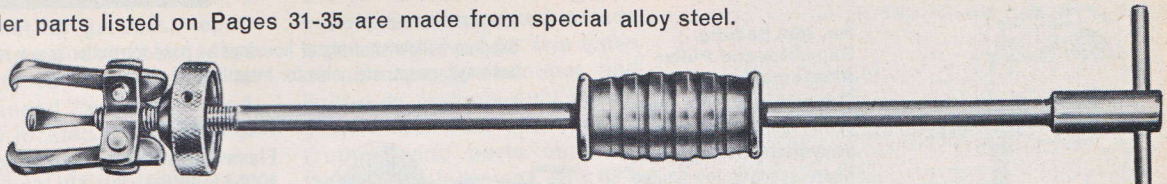


4030 B

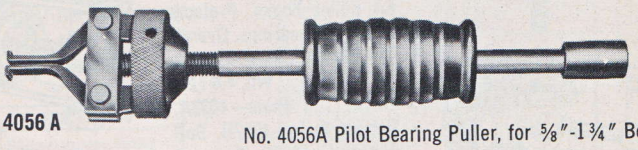
SLIDE-HAMMER PULLERS

Federal Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

All puller parts listed on Pages 31-35 are made from special alloy steel.

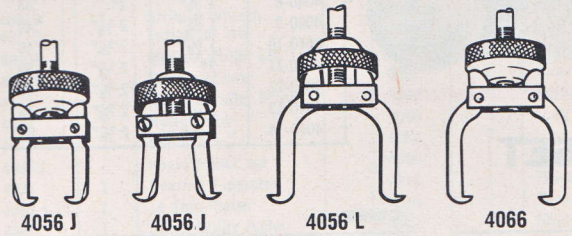


The PROTO No. 4056 slide-hammer puller is an essential pulling unit in every shop or plant where bearings, grease retainers, oil seals, sleeves and shafting must be removed. The jaws and adjusting nut are reversible, so the set can be used for either inside or outside pulling.

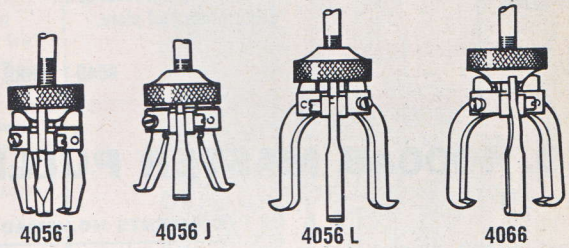


No. 4056A Pilot Bearing Puller, for 5/8"-1 3/4" Bearings

JAW COMBINATIONS WITH 2-WAY YOKE NO. 4061



JAW COMBINATIONS WITH 3-WAY YOKE NO. 4071



Using 4056S single jaw and 4056RS short rod to pull grease retainers with 3/4" center hole.

The No. 4056C crossarm permits slide-hammer cap screw pulling.

With the addition of a No. 4061 yoke, No. 4056 can be converted to a two-jaw puller.

SLIDE-HAMMER PULLER PARTS AND SETS

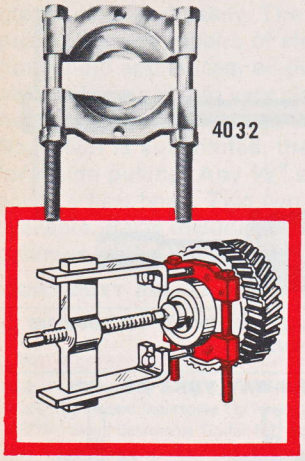
NO.	DESCRIPTION	WT., LBS.	SET 4056 PARTS	SET 4056A PARTS	SET 4056B PARTS
* 4056R	T-Handled Rod, 24" Long	1.90	1	..	1
* 4056RS	Short Rod, 12 3/8" Long, for Close Places and for Assembling Valve or Blind Bearing Puller	.96	..	1	..
* 4056H	Sliding Hammer with Fluted Grip	2.7	1	1	1
* 4056N	Knurled Reversible Adjusting Nut, 2 1/2" Diam.	.75	1	1	1
4063	Knurled Non-Reversible Adjusting Nut, 1 3/4" Diam.	.28	..	..	..
4061	Yoke, 2 1/2" Wide, for Holding Two Jaws	.23	..	1	1
4071	Yoke, 2 1/2" Diameter, for Holding Three Jaws	.32	1	..	1
* 4056PN	Pin for Holding Jaw in Yoke	.03	3	2	3
4056C	Slotted Cap Screw Pulling Crossarm, 6" Wide	1.10	..	..	1
4056J	Reversible Jaw, 3 1/2" Long, 2" Yoke to Hook, 1 1/4"-3 1/4" Inside and 0"-2 1/8" Outside Ranges	.11	3	..	3
4057J	Long Reversible Jaw, 4 43/64" Long, 3 5/16" Yoke to Hook, 1 1/4"-3" Inside and 0"- 4 3/4" Outside Ranges	.18	..	..	3
4058J	Inside Jaw, 3 13/64" L., 1 47/64" Yoke to Hook 5/8"-2" Range	.10	..	2	3
4056L	Inside Jaw, 4 9/16" L., 3" Yoke to Hook 1 5/8"-6" Range	.21	..	..	3
4066	Outside Jaw, 4 19/32" L., 3" Yoke to Hook 0"-4 3/8" Range	.21	..	..	3
4067	Long Outside Jaw, 7 23/32" Long, 6 1/8" Yoke to Hook 0"-6 7/8" Range	.30	..	..	3
4056S	Single Jaw, 2 15/16" L., for Wheel Alignment Brakes, Pulling Grease Retainers, Small Bearings, etc.	.17	..	..	1
	Set Weight, Lbs.		6.09	4.9	10.59

* Shown in Illustration at Top of Page.

SEPARATOR-PULLER AND STEP PLATES

Fedl. Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

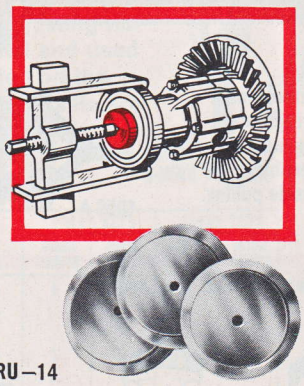


No. 4032 Bearing Separator and Puller Attachment

Flat surfaces, thin edges permit adjustment behind many gears, bearings, etc., where space is too limited for puller hooks. Protects expensive bearings. Overall width, 5 13/16". Max. opening, 4" x 4½". Wt., 4.4 Lbs. Parts: Top Plate—4032A. Bottom Plate—4032B. Bolt and Nut—4032S. Top and bottom holes are ½-13 thread. It is also ideal as an arbor press bed plate.

Step Plate Adapters

Used on hollow shafting or housings as base for puller screw to force off bushings, gears, etc., also for installing oil seals.



4040-1 THRU—14

NO. 4040 SET

Eleven sizes Step Plates, 4040-1 to 4040-11. Wt., 3.0 Lbs.

NO.	SMALL DIAM.	LARGE DIAM.	WT., LBS.
4040-1	3/4"	1"	.05
4040-2	7/8"	1 1/8"	.08
4040-3	1"	1 1/4"	.10
4040-4	1 1/8"	1 3/8"	.13
4040-5	1 1/4"	1 5/8"	.19
4040-6	1 3/8"	1 3/4"	.22
4040-7	1 1/2"	1 7/8"	.28
4040-8	1 5/8"	2"	.33
4040-9	1 3/4"	2 1/8"	.40
4040-10	1 7/8"	2 3/8"	.49
4040-11	2"	2 1/2"	.59
4040-12	2 1/8"	2 5/8"	.65
4040-13	2 1/4"	2 3/4"	.76
4040-14	2 3/8"	2 7/8"	.83

NO. 4000AB MASTER PULLER SET

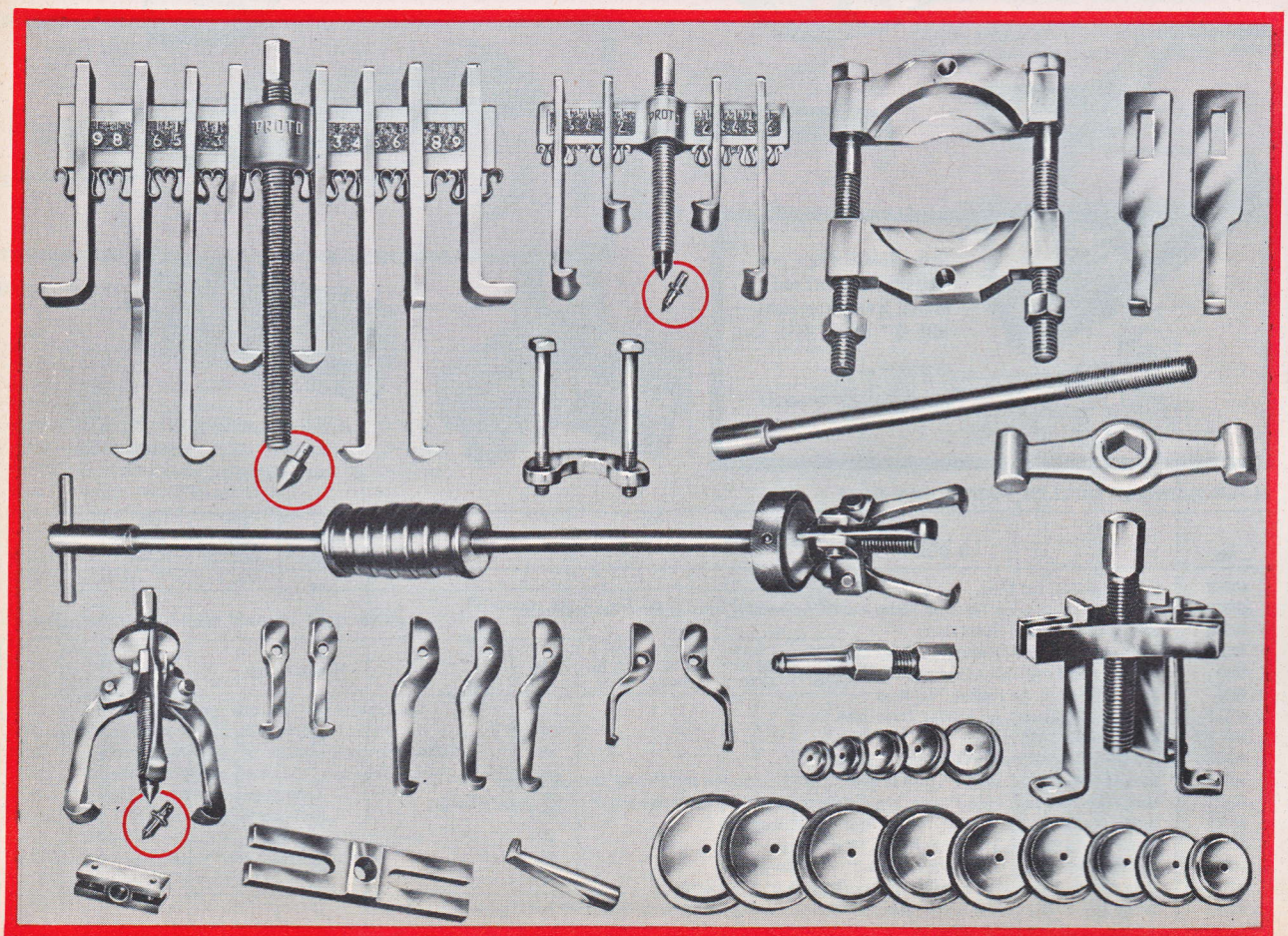
Ideal for vehicle and equipment repair shops, maintenance departments in many industries. Makes many of puller set-ups, due to parts interchangeability. Handles hundreds of pulling operations. Weight, 52 Lbs.

CONTENTS NO. 4000AB SET

NO.	QUANTITY	DESCRIPTION
4030B	1	Heavy-Duty Puller
4020B	1	Medium-Duty Puller
4056	1	Slide-Hammer Puller
4070C	1	Light-Duty Puller
4056J	2	Reversible 3½" Jaw
4061	1	Yoke for Two Jaws
4001	1	Universal Wheel Puller
4001W	1	Striking Wrench
4032	1	Bearing Separator
4040	1	Step Plate Adapter Set

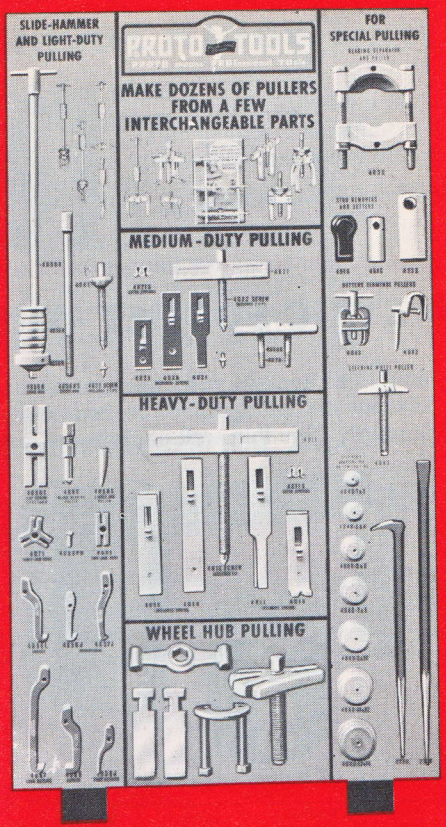
(CONT.)

NO.	QUANTITY	DESCRIPTION
4040-12	1	Step Plate Adapter
4040-13	1	Step Plate Adapter
4040-14	1	Step Plate Adapter
4027	2	Narrow Jaw
4056C	1	Cap Screw Crossarm
4056RS	1	Short Puller Rod
4056S	1	Single Puller Jaw
4057J	3	Reversible 4 5/8" Jaw
4058J	2	Pilot Bearing Jaw
4080	1	Blind Bearing Puller



NO. SD6 "PULLERMART"

A merchandiser for dealers, a master set for garages, repair shops and industrial plants that use all types of pullers. Parts are arranged "exploded" and properly located for assembly. Ten types of assemblies are shown by drawings. Interchangeable parts can be used in many setups, eliminating the need for a large number of costly special pullers. Sections of rack include basic parts used for five types of pulling—slide-hammer and light-duty, medium-duty, heavy-duty, wheel hub, and special. Outlines and parts numbers facilitate replacement. 32″x 63″. ⅝″ plywood rack has an easel back. Weight, 110 Lbs.



CONTENTS NO. SD6 "PULLERMART"

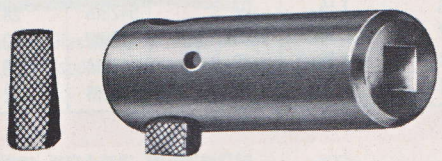
NO.	QUAN.	DESCRIPTION
2124	1	Utility Pry Bar
2130	1	Rolling Head Bar
4001	1	Wheel Puller Set
4001JT	3	Wheel Puller Leg
4001W	1	Striking Wrench
4011S	2	Spring for Jaw
4020B	1	Medium Puller Set
4021S	2	Spring for Jaw
4022	1	Medium Puller Screw
4027	2	Narrow Jaw
4028	2	Cap Screw
4030B	1	Heavy Puller Set
4032	1	Bearing Separator
4040-1-14	1	14 Step Plates
4041	1	Small Utility Puller
4042	1	Battery Terminal Puller
4043	1	Steering Wheel Puller

NO.	QUAN.	DESCRIPTION
4056	1	Slide-Hammer Puller
4056C	2	Slotted Crossarm
4056L	3	Long Inside Jaw
4056RS	1	Short Rod
4056S	1	Single Jaw Puller
4057J	3	Long Reversible Jaw
4058J	2	Pilot Bearing Jaw
4061	1	Two-Way Yoke
4063	1	Adjusting Nut
4066	3	Long Outside Jaw
4067	3	Long Outside Jaw
4080	1	Blind Bearing Puller
4510	1	Power Stud Remover
4515	1	Stud Remover
4532	1	Stud Remover
....	1	Storage Rack
PR62158	10	Puller Manual

SPECIAL-PURPOSE PULLERS

MANUAL STUD REMOVERS AND SETTERS

All puller parts listed on Pages 31-35 are made from special alloy steel.



Wedge type removers and setters are superior to eccentric roller type, give long service, handle very short studs (¾″ for No. 4515), have small turning radius which clears obstructions that would block operation of other types. Tapered, deeply-serrated wedges grip tighter as pressure is applied and take firm hold on stubborn studs. Each unit has two wedges to increase usable range. Spring-tensioned pin holds wedges in body when not in use.

Fedl. Description: "Stud Remover and Setter, Wedge." Specs.: GGG-S-775a, Type IV. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

STANDARD ½″ SQUARE DRIVE

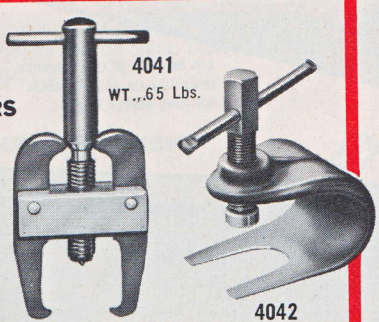
NO.	DESCRIPTION	FOR STUDS	WT., LBS.	DIAM.	LGTH.
4515	Stud Remover	¼″ - ⅝″	.78	1 3/16″	3 ½″
4516	Thick Wedge Only	¼″ - 7/16″	.07		
4517	Thin Wedge Only	½″ - ⅝″	.04		

HEAVY-DUTY ¾″ SQUARE DRIVE

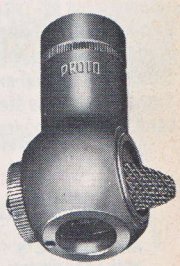
4532	Stud Remover	⅝″ - 1″	3.4	2″	5 ⅛″
4533	Thick Wedge Only	⅝″ - ¾″	.34		
4534	Thin Wedge Only	¾″ - 1″	.18		

NOS. 4041 AND 4042, BATTERY TERMINAL AND BEARING PULLERS

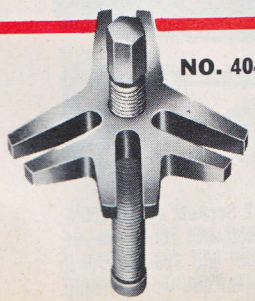
Remove terminals quickly, easily, without damaging posts. No. 4041, conventional type, is used for small bearings and other jobs. No. 4042, unusual type, costs less and is faster to set up and use.



NO. 4510 POWER-TYPE STUD REMOVER AND SETTER

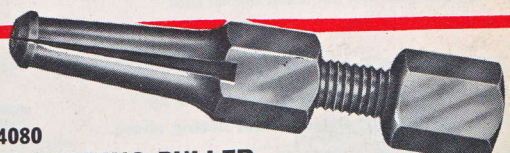


Concentric hole with a wedge—most efficient, fastest design available. Extra husky for turning ⅜″ to ⅝″ studs and bolts with ½″ drive power guns or manual socket handles. Single, reversible wedge is forced against stud by spring—saves time, prevents accidents. Screw keeps wedge from falling. Plunger, spring and wedge mounted in sleeve turned by knurled knob for reversing. File-type teeth dig into stud. Length, 3 ½″. Weight, 1.00 Lb. No. 4511—Spare Wedge Assembly. No. 4512—Spare Revolving Sleeve Assembly.



NO. 4043 STEERING WHEEL PULLER

Removes drilled and tapped steering wheels, and ideal for many other cap screw pulling jobs. Holds two diametrically opposed cap screws, or three screws 120° apart. Rotatable screw tip is slotted to prevent interference with horn button wiring. Weight, 1.20 Lbs. No. 4043B—Spare Body. No. 4043S—Spare Screw with Tip No. 4043T—Spare Tip.



NO. 4080 BLIND BEARING PULLER

Simple, efficient, collet-type, pulls Chevrolet, Ford and Packard pilot bearings quickly, without damage. Turning screw expands outer shoulder and grips bearing. Expands to 1 1/16″ dia. Has many other uses. Can be used alone or with No. 4056 slide-hammer puller. Length, 4 ½″ Weight, .34 Lb. No. 4080B—Spare Body. No. 4080S—Spare Screw.

WHITWORTH SOCKETS*

Most-used sizes for maintenance of British cars, motorcycles and equipment.

* Drive end fits regular U.S. Standard ratchets and attachments.

⅜" DRIVE SOCKETS 12-PT.

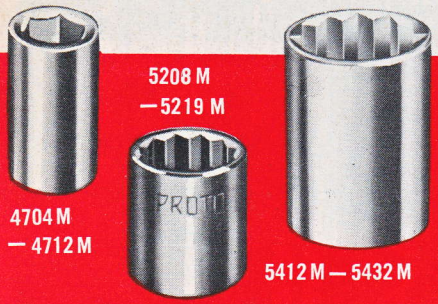
NO.	WHITWORTH SIZE	SOCKET SIZE	TOTAL LENGTH	WT., LBS.
5206W	3/16	.340"	1 1/16"	.04
5208W	1/4	.445"	1 1/16"	.06
5210W	5/16	.525"	1 1/8"	.07
5212W	3/8	.600"	1 1/8"	.11

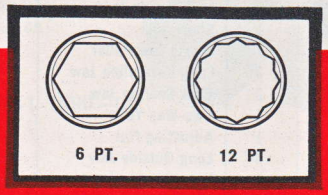
PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

See pages 60 and 61 for all Whitworth and Metric Sockets, wrenches.

METRIC SOCKET WRENCHES ¼", ⅜" AND ½" SQUARE DRIVES

Metric-size sockets and open end wrenches are for cars, machinery, equipment, etc., made in France, Italy, Germany and most other European countries except England, which generally use Whitworth or U.S. standards. The thin-wall sockets are made from fine alloy steel, hot formed and quality chrome plated.





¼" SQUARE DRIVE SOCKETS (6-Point)

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
4704M	4	⅞	.01
4705M	5	⅞	.02
4706M	6	⅞	.02
4707M	7	⅞	.02
4708M	8	⅞	.02
4709M	9	⅞	.03
4710M	10	⅞	.03
4711M	11	⅞	.04
4712M	12	⅞	.05

⅜" SQUARE DRIVE SOCKETS (12-Point) ★

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5208M	8	1 1/16	.04
5209M	9	1 1/16	.04
5210M	10	1 1/16	.05
5211M	11	1 1/16	.05
5212M	12	1 1/16	.06
5213M	13	1 1/8	.06
5214M	14	1 1/8	.06
5215M	15	1 1/8	.08
5216M	16	1 1/8	.07
5217M	17	1 3/16	.08
5218M	18	1 3/16	.10
5219M	19	1 3/16	.13

½" SQUARE DRIVE SOCKETS (12-Point)

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5412M	12	1 13/32	.10
5413M	13	1 13/32	.11
5414M	14	1 13/32	.10
5415M	15	1 13/32	.11
5416M	16	1 13/32	.16
5417M	17	1 13/32	.13
5418M	18	1 13/32	.17
5419M	19	1 13/32	.16
5420M	20	1 13/32	.18
5421M	21	1 13/32	.21
5422M	22	1 17/32	.28
5423M	23	1 17/32	.32
5424M	24	1 17/32	.37
5425M	25	1 17/32	.30
5426M	26	1 17/32	.32
5427M	27	1 17/32	.31
5428M	28	1 25/32	.49
5429M	29	1 25/32	.46
5430M	30	1 25/32	.47
5432M	32	1 25/32	.49

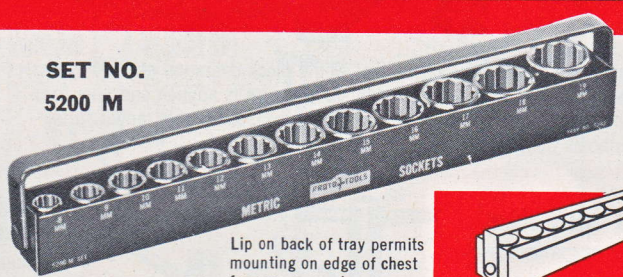
METRIC SOCKET SETS

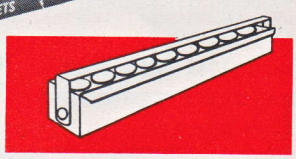
SET NO. 5200 M (12 Sockets & Tray)

Includes 12 metric sockets indicated by red star ★ in ⅜" Drive Socket listing above.

Twelve sizes ⅜" sq. drive, 12 point, Metric sockets in red-lacquered tray—keeps sockets separate from look-alike Standard sockets in mechanic's tool chest. All sockets hot-punched in special analysis alloy steel, quality chrome plate. Size and numbers stenciled on side of tray. Spillproof locking band. All Proto guaranteed.

SET NO. 5200 M



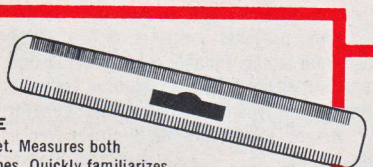


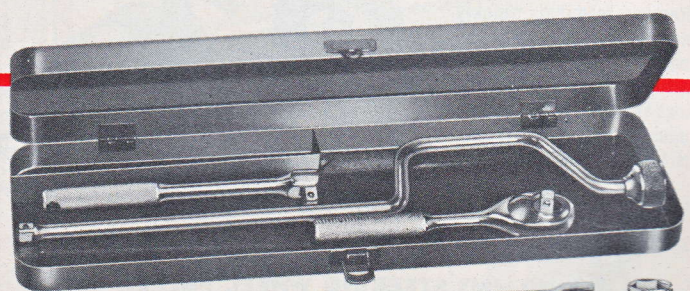
Lip on back of tray permits mounting on edge of chest for easy access in use.

FREE

MECHANIC'S MILLIMETER POCKET RULE

packed with each set. Measures both millimeters and inches. Quickly familiarizes any mechanic with metric bolt and nut sizes



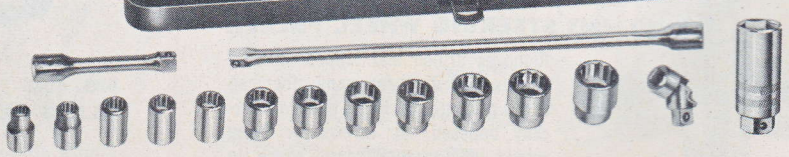


5200 ABM SET

Includes 12 metric sockets indicated by red star ★ in ⅜" Drive Socket listing above.

Set also includes the following:

5026HP	Spark Plug Socket, 12 pt. 14mm opening
5249	Ratchet, 7"
5260	Extension, 3 ½"
5262	Extension, 12"
5265	Hinge Handle, 7 ⅜"
5270	Universal Joint
5280	Speed Handle, 16 ⅞"
5295	Steel Box, 18 ½" x 5 ¼" x 1 ½"

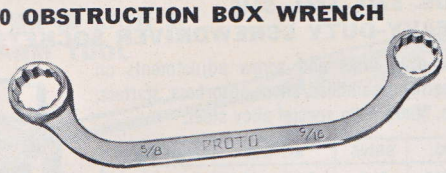


Complete Metric Socket Set and Attachments. Same 12 Sockets as in 5200M; plus 5026HP special patented spark plug-holding Socket with rubber insert; reversible Ratchet; two extensions; Hinge Handle; U-Joint and Speeder. All in rugged steel box lacquered in red. High quality alloy steel and workmanship. Every item guaranteed.

SPECIAL-PURPOSE TOOLS

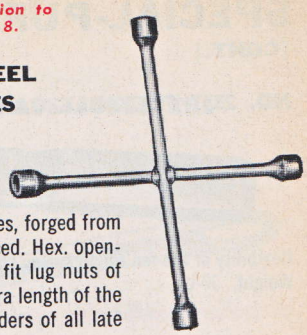
For Fedl. Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NO. 1730 OBSTRUCTION BOX WRENCH



Useful on many starters. Clearance at middle, 1". Box openings, 12 point, 9/16" x 5/8". Length 6 21/32". Alloy steel, chrome plated. Weight, .20 Lb. See page 23 for other sizes.

NO. 2151 & 2152 WHEEL LUG NUT WRENCHES



No. 2151 Length, 18" Wt., 3.0 Lbs.
No. 2152 Length, 21½" Wt., 3.5 Lbs.

Speedy, four-way rim wrenches, forged from special steel and finely balanced. Hex. openings of ¾", ¾", 13/16" & ⅞" fit lug nuts of most cars and trucks. The extra length of the No. 2152 clears the deep fenders of all late model cars.

NO. 2005 BRAKE ADJUSTING TOOL

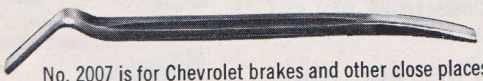
To remove and replace Bendix Brake Springs (General Motors' cars and many others) and any type where the spring is attached to a post. Has replaceable spring removal socket. Total wt., .40 Lbs. No. 2005 S Replaceable socket.

NO. 2301 MUFFLER REMOVAL TOOL

A practical, simple tool for removing mufflers and tailpipes. Easy and safe to use. Makes quick work of taking off worn-out mufflers that are corroded, burned and hard to reach. Prevents damage to usable parts. Forged from special alloy steel. Length, 6 ⅛". Weight, .29 Lb.

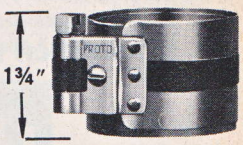
NO. 2006 & 2007 BRAKE ADJUSTING TOOLS

No. 2006 adjusts star nuts on two-shoe Bendix brakes. It is 9 1/16" long, has 1 ¾" spoons and weighs .30 Lb.



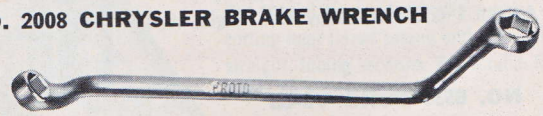
No. 2007 is for Chevrolet brakes and other close places. It is 6 15/16" long, has 1 3/16" and 1 7/16" spoons and weighs .18 Lb. Both are alloy steel.

NO. 2315 PISTON RING COMPRESSOR



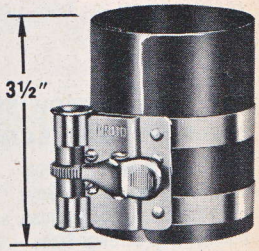
Single-band type, designed for low-horsepower, small-bore engines used on auxiliary power plants and pumping stations, lawn mowers, outboard motors, motor scooters, etc. Range 2" to 5". Band width 1¾". Wt. .32 lb.

NO. 2008 CHRYSLER BRAKE WRENCH



Has ⅜" hex. socket for brake bleeder screw and 7/16" hex. socket for adjusting screw on late Chryslers and De Sotos. Clears tires. Alloy steel. Length, 7 5/16". Weight, .19 Lb.

NO. 2316 PISTON RING COMPRESSOR



Band-operating ratchet prevents breakage and slippage. Wide band (3 ½") has 2⅛" to 5" range. Ell handle included. Weight, .70 Lb.

NO. 2009 BRAKE BLEEDER WRENCH

For Chevrolets, Fords and Lincolns with ball joint front end suspension. L-shaped handle has 5/16" hex. socket to remove bleeder screw cap and ⅜" hex. socket for turning screw. Alloy steel. Length, 6 ¾". Weight, .24 Lb.

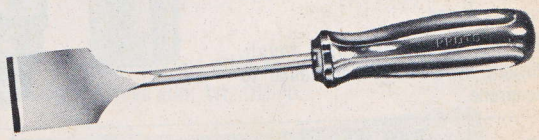
NO. 2335 VALVE GUIDE CLEANER

Turning a nut adjusts the five flexible blades to any valve guide size. Length, 9 ¾". Weight, .10 Lb. Individual blade—2335 B

NO. 2010 CHRYSLER BRAKE SPRING TOOL

Forged, milled and swaged from Protoloy steel, this tool designed to quickly remove and replace brake shoe returns on '57, '58, '59 Chryslers, De Sotos, Dodges and Plymouths. Length 5½" x 6½". Wt. .25 lb.

NO. 2336 GASKET SCRAPER



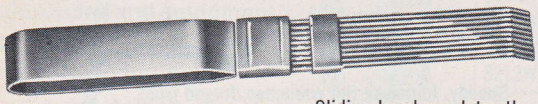
For removing shellacked gaskets, scraping carbon and many other uses. Has handle of tough, fire-resistant plastic, and round blade of special alloy steel. Lgth., 10 ⅜". Blade width, 1 ½". Wt., .41 Lb.

SPECIAL-PURPOSE TOOLS
[CONT.]

For Federal Specs. see "Proto Conversion to Federal stock numbers" Bulletin No. 5918

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

NO. 2337 FLEXIBLE CARBON SCRAPER



Sliding band regulates the flexibility of the ten round spring steel blades. Length, 9". Width, 1". Weight, .30 Lb.

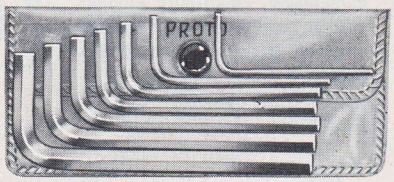
NOS. 2344 & 2345 GRAB-ALL RETRIEVING AND HOLDING TOOLS

Two grippers at end of flexible casing grab all types of small objects in hard-to-reach places. These tools bend around obstructions and hold both metallic and non-metallic items—two big advantages over magnet rod types. Grab-Alls are useful for holding small things, for fishing objects out of garbage disposers, sinks and drains, and for retrieving nuts, cotter keys that fall into tight spots.

NO.	SIZE	LENGTH	WT., LBS.
2344	1	17 ½"	.18
2345	2	26"	.30

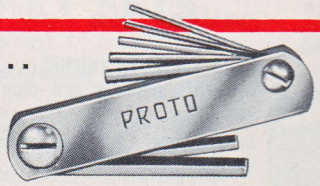
Federal Specs: MIL-F-4571B, Type 1, class 2.

NO. 4977 WRENCH SET . . . HOLLOW HEAD SCREW



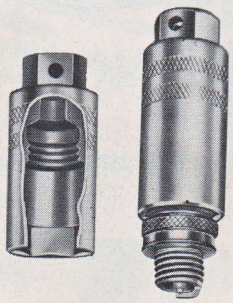
Handy 2" x 4 ½" plastic case, containing seven plated L-type hexagon keys for turning Allen head, socket head and hollow head screws. Sizes—5/64 (fits No. 8 set screws), 3/32 (No. 10), 1/8 (1/4"), 5/32 (5/16"), 3/16 (3/8"), 7/32 (7/16") and 1/4 (1/2"). Weight, .21 Lb.

NO. 4978 WRENCH SET . . . HOLLOW HEAD SCREW



Pocket-knife type 3" metal case, with seven hex keys for Allen head, socket head, and hollow head screws. Sizes—.050 (fits No. 4 set screws), 1/16 (Nos. 5 and 6), 5/64 (No. 8), 3/32 (No. 10), 1/8 (1/4"), 5/32 (5/16") and 3/16 (3/8"). Weight, .16 Lb.

5026HPA AND 5326HPA SPARK PLUG SOCKET WITH REPLACEABLE BUNA-N* INSERT



To remove and replace spark plugs more quickly and without breakage. Insert lasts longer—has special new grooves that grip on brass tip as well as porcelain. Socket—hot-broached of special alloy steel; hex opening for greater strength; polished and chrome plated.

*Buna-N is an extremely tough, durable synthetic rubber similar to neoprene.

NUMBER	DRIVE SIZE Female Sq.	DRIVE SIZE Male Hex.	OPENING	LENGTH	WT., LBS.	SPARE INSERT
5026HPA	3/8"	3/4"	13/16"	2 17/32"	.28	5026RA
5326HPA	1/2"	3/4"	13/16"	2 17/32"	.28	5026RA

NOS. 5244, 5444, 5446 HEAVY-DUTY SCREWDRIVER SOCKETS

For drag links and screw adjustments on steering assemblies, shock absorbers, starters, etc. Made from special alloy steel.

NO.	DRIVE	BIT SIZE	LENGTH	LBS.
5244	3/8"	5/8" x .116"	1 1/32"	.08
5444	1/2"	3/4" x .115"	1 7/32"	.14
5446	1/2"	15/16" x .154"	1 7/32"	.20

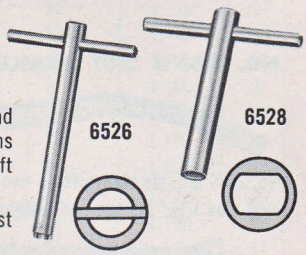
NO. 6523 CONNECTING ROD SOCKETS

6523

Thin nose, hexagon, 1/2" drive socket. Made from PROTOLOY® special alloy steel.

NO.	OPENING	LENGTH	WT., LB.
6523	9/16"	1 7/16"	.11

NOS. 6526 & 6528 CARBURETOR JET WRENCHES



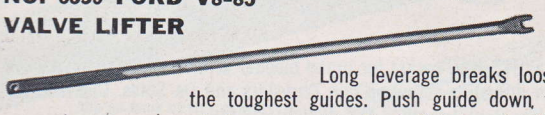
No. 6526 (Wt., .07 Lb.) fits Holley and Chandler-Groves carburetors. Turns jets quickly, without damaging soft jet material.

No. 6528 (Wt., .06 Lb.) fits most Strombergs. Made of alloy steel.

NO. 6535 DISTRIBUTOR POINT SOCKET

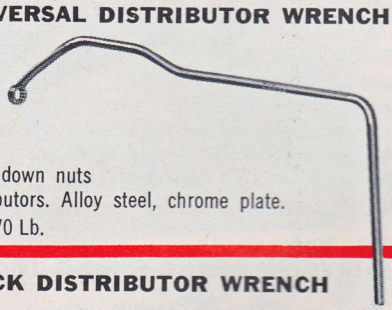
For late Chevrolets. Two prongs turn the housing terminal screw. Drive, 1/4". Length, 1 1/16". Made of alloy steel. Weight, .02 Lb.

NO. 6539 FORD V8-85 VALVE LIFTER



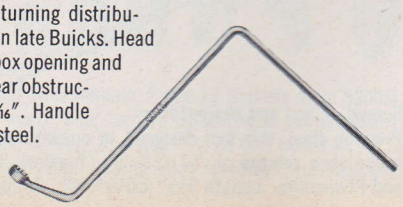
Long leverage breaks loose the toughest guides. Push guide down to remove keeper, and pry to force out guide. Stock, 3/4". Length, 30". Alloy steel. Weight, 3.5 Lbs.

NO. 6540 UNIVERSAL DISTRIBUTOR WRENCH



New design 6540 especially for '57 Fords, but desirable wherever 1/2" hold-down nuts are used on distributors. Alloy steel, chrome plate. Length 17". Wt., .70 Lb.

NO. 6541 BUICK DISTRIBUTOR WRENCH



For reaching and turning distributor mounting bolt on late Buicks. Head has 12-point, 9/16" box opening and is offset 1 7/8" to clear obstructions. Height, 10 3/16". Handle length, 8". Alloy steel. Weight, .57 Lb.

SPECIAL-PURPOSE TOOLS [CONT.]

NO. 6545 DRAG LINK & SHOCK ARM TOOL

Slim, tapered fork is readily inserted to separate shock links and tie rods. Length, 16". Fork opening, 21/32". Made of special alloy steel. Weight, 2.3 Lbs.

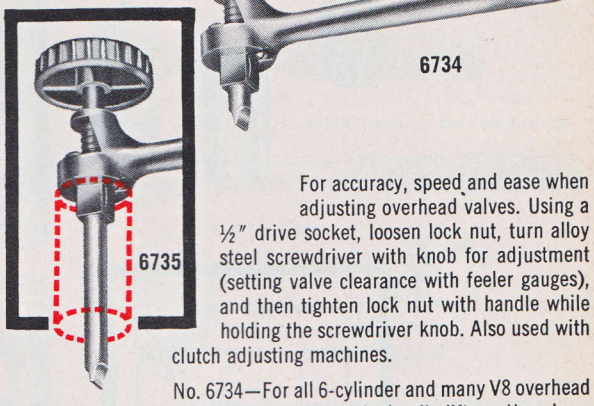
NO. 6546 PITMAN ARM PRY BAR

Eliminates need for expensive pullers to remove Pitman arms. Useful also for pulling gears, bearings and pulleys, and lifting blocks and heavy assemblies. Length, 20". Fork opening, 1 1/4". Of alloy steel. Wt., 2.8 Lbs.

NO. 6601 STARTER WRENCH

For Plymouth, Dodge, De Soto and Chrysler cars. Clears objects when removing or replacing starter. Has 5/8" box opening. Length, 9 3/4". Alloy steel. Weight, .35 Lb.

NO. 6734 OVERHEAD VALVE ADJUSTERS



For accuracy, speed and ease when adjusting overhead valves. Using a 1/2" drive socket, loosen lock nut, turn alloy steel screwdriver with knob for adjustment (setting valve clearance with feeler gauges), and then tighten lock nut with handle while holding the screwdriver knob. Also used with clutch adjusting machines.

No. 6734—For all 6-cylinder and many V8 overhead valve engines without hydraulic lifters. Has clearance for adjusting valves under fire wall on late 6-cylinder Chevrolets. Maximum bit length, 1 3/8". Weight, .33 Lb.

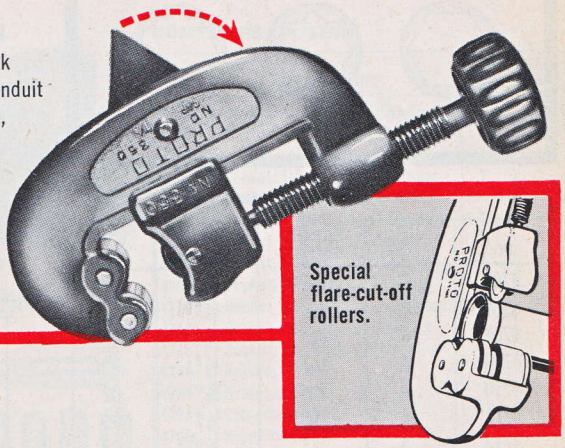
No. 6734S—Spare Screwdriver Blade with Knob. No. 6734H—Spare Socket-Holding Spring with Screw.

No. 6735—For late Ford, Mercury and other overhead valve engines. Maximum bit length of 3 5/32" clears exhaust manifolds. Weight, .36 Lb. No. 6735S—Spare Screwdriver Blade with Knob.

NO. 350 TUBING CUTTER

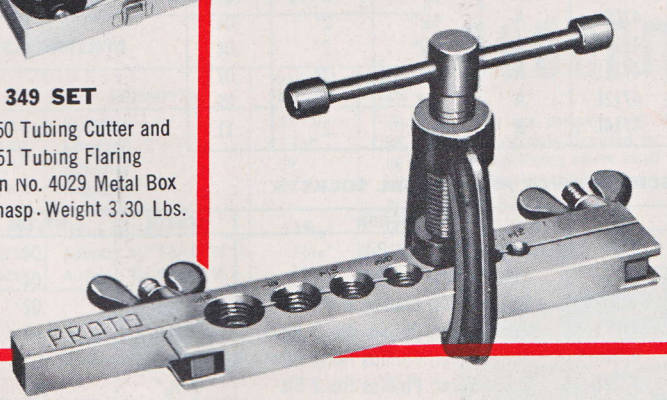
An increasingly useful tool for automotive and truck mechanics, plumbers, etc. Cuts metal tubing or conduit from 1/8" to 1 1/8" O.D. Husky screw in alloy frame, plus scientifically heat treated alloy steel blade gives clean, fast cuts and long service.

Has special flare-cut-off rollers which permit cutting near flared tubing ends as well as on straight tubing sections. Retractable Reamer Blade on frame. Wt. .75 lb.



NO. 349 SET

No. 350 Tubing Cutter and No. 351 Tubing Flaring Tool in No. 4029 Metal Box with hasp. Weight 3.30 Lbs.



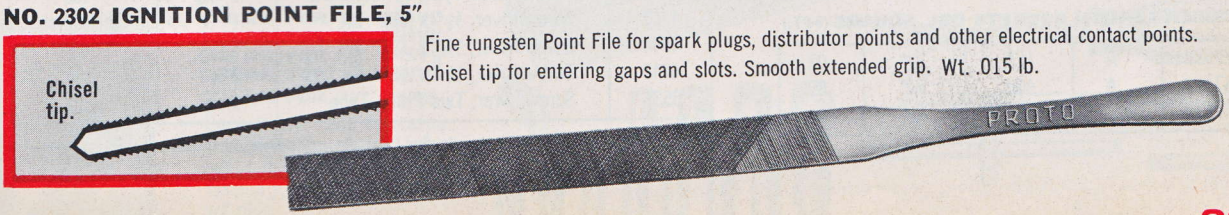
NO. 351 TUBING FLARING TOOL

with slip-on yoke

A complete flaring tool for tubing sizes 3/16" through 5/8". Each part in the assembly is carefully finished to best perform its special function . . . Flaring Yoke is malleable iron of proper toughness; tapered cone is hardened and polished, and rides on a ball-bearing; all steel parts are bright plated. Yoke Frame is black wrinkle finish. Wt. 1.90 lbs.

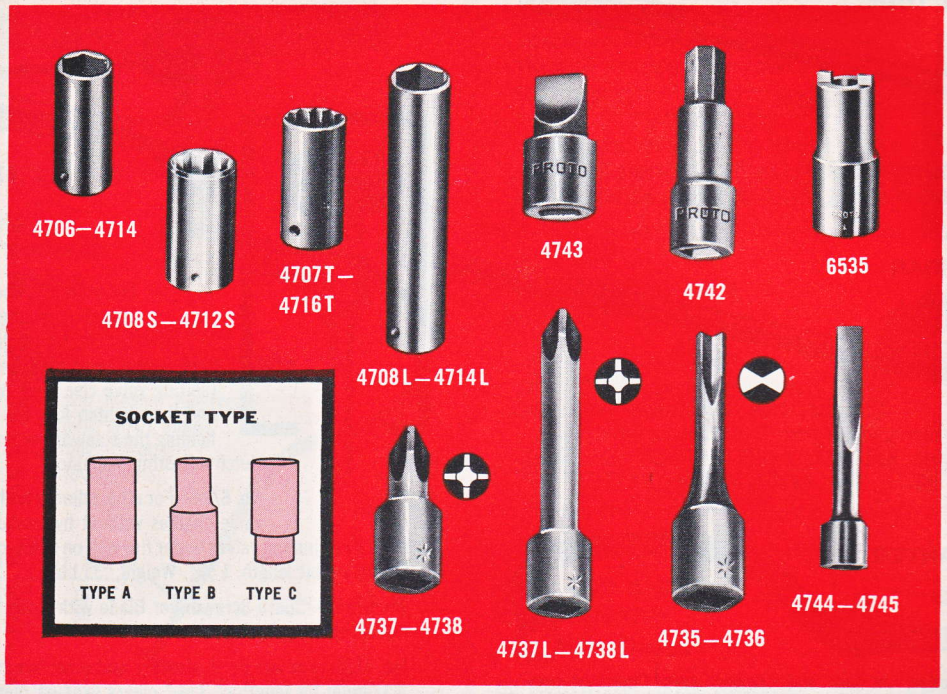
NO. 2302 IGNITION POINT FILE, 5"

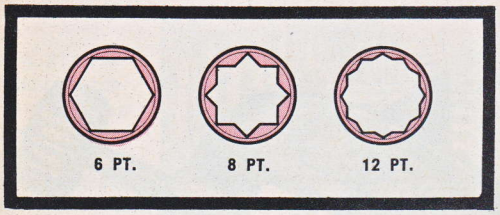
Fine tungsten Point File for spark plugs, distributor points and other electrical contact points. Chisel tip for entering gaps and slots. Smooth extended grip. Wt. .015 lb.



1/4" SQUARE DRIVE MIDGET SOCKET WRENCHES

PROTO TOOLS
PROfessional QUALITY TOols





Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers" Bulletin No. 5918.

PROTO sockets are made from PROTOLOY® special alloy steel chrome plated, and have thin walls to get at hard-to-reach nuts.

Midget sockets are specifically designed for all kinds of light work where small nuts and bolts may be turned, such as the repair of carburetors, distributors, radios, instruments, etc. They are accurately made from alloy steels for super strength—and scientifically heat treated to insure long, dependable service.

REGULAR LENGTH SOCKETS HEXAGON (6-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4706	B	3/16"	7/8"	.02
4707	B	7/32"	7/8"	.02
4708	B	1/4"	7/8"	.02
4709	A	9/32"	7/8"	.02
4710	A	5/16"	7/8"	.02
4711	A	11/32"	7/8"	.03
4712	A	3/8"	7/8"	.03
4714	C	7/16"	7/8"	.04

REGULAR LENGTH SOCKETS DOUBLE HEX. (12-PT.)

4707T	B	7/32"	7/8"	.02
4708T	B	1/4"	7/8"	.02
4709T	A	9/32"	7/8"	.02
4710T	A	5/16"	7/8"	.02
4711T	A	11/32"	7/8"	.03
4712T	A	3/8"	7/8"	.03
4714T	C	7/16"	7/8"	.04
4716T	C	1/2"	7/8"	.05

REGULAR LENGTH SOCKETS DBL. SQUARE (8-PT.)

4708S	A	1/4"	7/8"	.02
4710S	A	5/16"	7/8"	.05
4712S	A	3/8"	7/8"	.05

DEEP LENGTH SOCKETS HEXAGON (6-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4708L	B	1/4"	2"	.04
4709L	A	9/32"	2"	.04
4710L	A	5/16"	2"	.04
4711L	A	11/32"	2"	.07
4712L	A	3/8"	2"	.09
4714L	A	7/16"	2"	.11

For Power Sockets, See Pages 51 thru 56. For Metric Sockets, See Page 36.

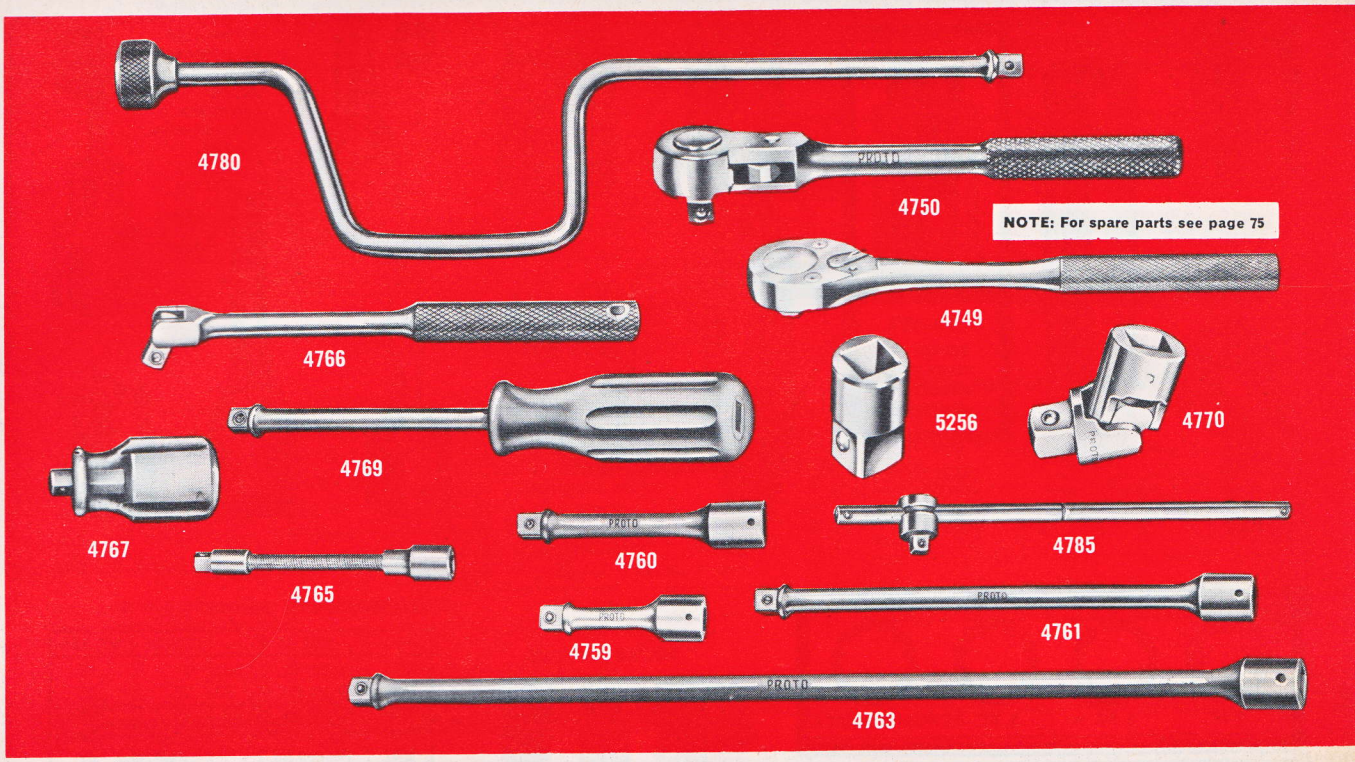
SCREWDRIVER AND SPECIAL SOCKETS

NO.	DESCRIPTION	LENGTH	WT., LBS.
4735	Clutch Head 5/32" Bit	1 1/2"	.04
4736	Clutch Head 3/16" Bit	1 1/2"	.04
4737	Screwdriver, Phillips No. 1 Bit	1 1/16"	.02
4737L	Screwdriver, Phillips No. 1 Bit	2 1/16"	.03
4738	Screwdriver, Phillips No. 2 Bit	1 1/16"	.02
4738L	Screwdriver, Phillips No. 2 Bit	2 1/16"	.03
*4742	Hollow-Head Type, 1/4" Hex. Bit	1 13/32"	.03
*4743	Screwdriver, 3/8" x .062" Bit	1"	.02
4744	Screwdriver, 3/16" x .030" Bit	1 11/16"	.03
4745	Screwdriver, 1/4" x .030" Bit	2 7/8"	.04
‡6535	Screwdriver, Two-Prong Type	1 1/16"	.02

*Used in Automatic Transmission Sets. See Page 26. ‡Chevrolet Distributor Socket. See Page 38

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

1/4" SQUARE DRIVE MIDGET SOCKET WRENCH HANDLES, ATTACHMENTS AND SETS



Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers," Bulletin No. 5918.

HANDLES

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4749	Reversible Ratchet *	5"	.21
4750	Reversible Ratchet *	4 1/2"	.18
4766	Hinge Handle	5 3/8"	.15
4767	Stubby Socket Driver, Plastic Handle	2 5/32"	.07
4769	Regular Socket Driver, Plastic Handle	6 1/8"	.16
4780	Speed Handle	16"	.39
4785	Sliding Bar T Handle	4 1/2"	.08

ATTACHMENTS

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4759	Extension	2"	.04
4760	Extension	3 1/2"	.05
4761	Extension	6"	.08
4763	Extension	14"	.18
4765	Flexible Extension	6"	.08
4770	Universal Joint	1 19/64"	.04
5256	Adapter, 1/4" F., 3/8" M.	15/16"	.03
5255	Adapter, 3/8" F., 1/4" M.	15/16"	.05

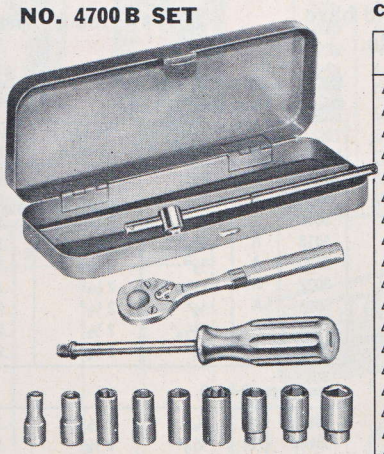
* Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

RATCHET REPAIR KITS

4749 RK FOR 1/4" DRIVE
5249 RK FOR 3/8" DRIVE
5449 RK FOR 1/2" DRIVE
5450 RK FOR 1/2" DRIVE
5649 RK FOR 3/4" DRIVE

Each "RK" Kit contains 1 cover, 2 cover screws, 1 dog left, 1 dog right, 1 reversing assembly, 2 springs, 1 wheel w/ plug.

NO. 4700 B SET



Here are complete sets of handy midget tools, designed for all kinds of light work where small nuts and bolts must be turned

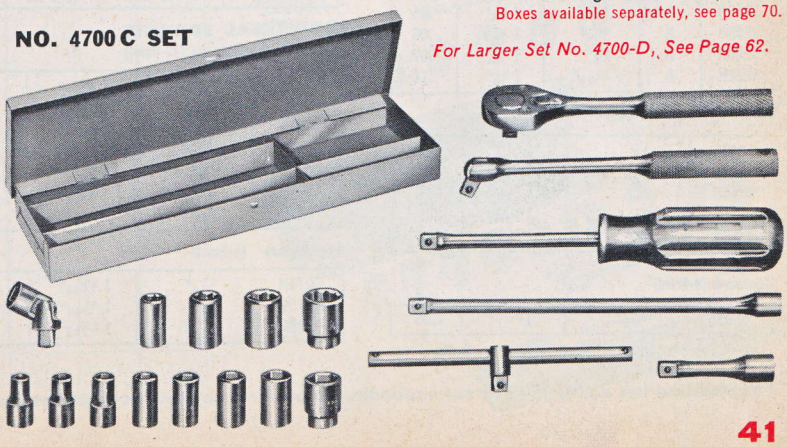
CONTENTS OF SETS

NO.	DESCRIPTION	SET 4700 B	SET 4700 C
4706	Socket, 6-Point, 3/16" Opening		1
4707	Socket, 6-Point, 7/32" Opening	1	1
4708	Socket, 6-Point, 1/4" Opening	1	1
4709	Socket, 6-Point, 9/32" Opening	1	1
4710	Socket, 6-Point, 5/16" Opening	1	1
4711	Socket, 6-Point, 11/32" Opening	1	1
4712	Socket, 6-Point, 3/8" Opening	1	1
4714	Socket, 6-Point, 7/16" Opening	1	1
4708S	Socket, 8-Point, 1/4" Opening	1	1
4710S	Socket, 8-Point, 5/16" Opening	1	1
4712S	Socket, 8-Point, 3/8" Opening		1
4716T	Socket, 12-Point, 1/2" Opening		1
4749	Ratchet	1	1
4759	Extension, 2"		1
4761	Extension, 6"		1
4766	Hinge Handle		1
4769	Plastic Handle	1	1
4770	Universal Joint		1
4785	Sliding Bar Handle	1	1
4795	Steel Box, 6 3/4" x 2 1/4" x 1"	1	
4796	Metal Box		1

Weight of Set 4700 B, 1.4 Lbs.
Weight of Set 4700 C, 2.5 Lbs.
Boxes available separately, see page 70.

For Larger Set No. 4700-D, See Page 62.

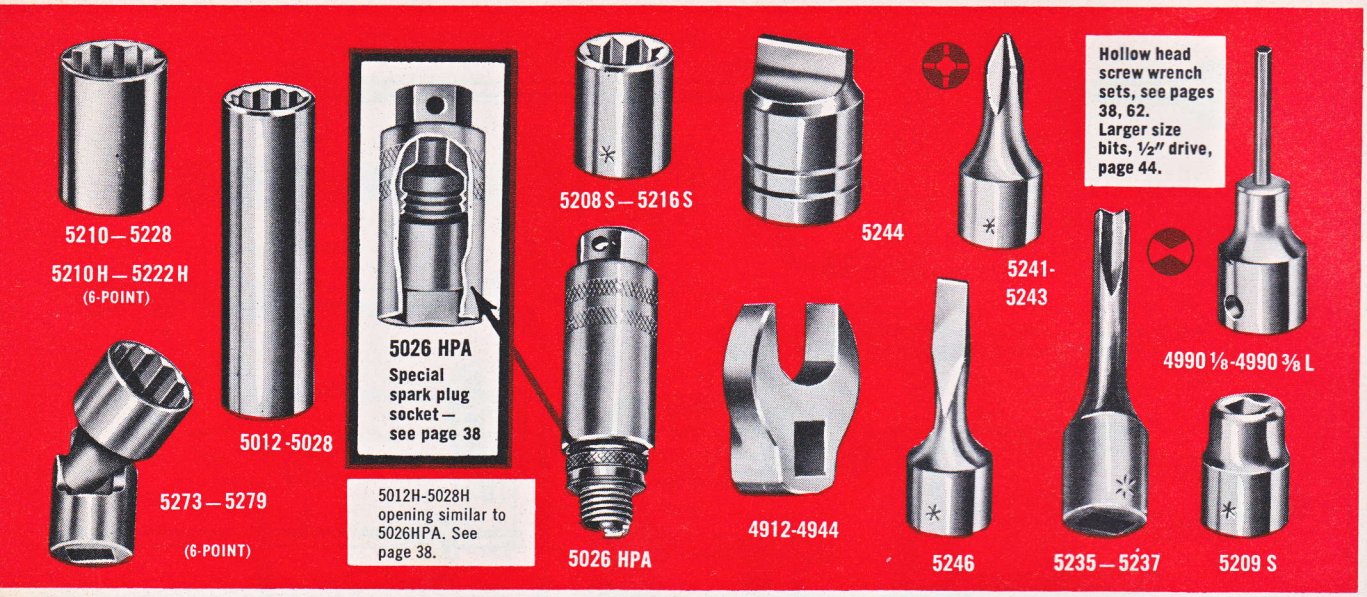
NO. 4700 C SET

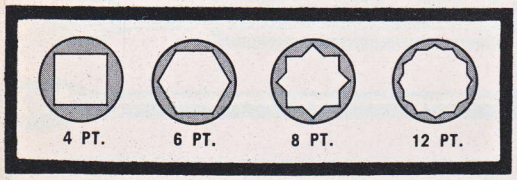


3/8" SQUARE DRIVE CUB SOCKET WRENCHES

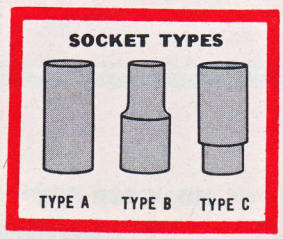
Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PROTO TOOLS — PROFESSIONAL QUALITY TOOLS





PROTO sockets are made from PROTOLOY® special alloy steel, chrome plated, and have thin walls to get at hard-to-reach nuts.



REGULAR LENGTH SOCKETS

Double Hexagon (12-Point)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5210	A	5/16"	1 1/16"	.04
5212	A	3/8"	1 1/16"	.04
5214	A	7/16"	1 1/16"	.04
5216	A	1/2"	1 1/8"	.05
5217	A	17/32"	1 1/8"	.06
5218	A	9/16"	1 1/8"	.06
5219	A	19/32"	1 1/8"	.07
5220	A	5/8"	1 1/8"	.07
5222	A	11/16"	1 1/8"	.09
5224	A	3/4"	1 3/16"	.09
5225	A	25/32"	1 3/16"	.12
5226	A	13/16"	1 3/16"	.12
5228	A	7/8"	1 3/16"	.15

Hexagon (6-Point)

5210H	A	5/16"	1 1/16"	.04
5212H	A	3/8"	1 1/16"	.05
5214H	A	7/16"	1 1/16"	.04
5216H	A	1/2"	1 1/8"	.05
5218H	A	9/16"	1 1/8"	.06
5220H	A	5/8"	1 1/8"	.07
5222H	A	11/16"	1 1/8"	.10

Double Square (8-Point)

5208S	1/4"	1"	.04
5210S	5/16"	1 1/16"	.04
5212S	3/8"	1 1/16"	.06
5214S	7/16"	1 1/16"	.07
5216S	1/2"	1 1/8"	.10

Square (4-Point)

● 5209S	9/32"	1"	.05

● For Buick Dynaflow Torque Converter Drain Plug.

DEEP LENGTH SOCKETS

Double Hexagon (12-Point)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5012	B	3/8"	2 1/8"	.10
5014	A	7/16"	2 1/8"	.08
5016	A	1/2"	2 1/8"	.10
5018	A	9/16"	2 1/8"	.14
5020	A	5/8"	2 1/8"	.15
5022	A	11/16"	2 1/8"	.19
5024	A	3/4"	2 1/8"	.21
5026	A	13/16"	2 1/2"	.28
5028	A	7/8"	2 1/2"	.27

Hexagon (6-Point)

5012H	B	3/8"	2 1/8"	.10
5014H	A	7/16"	2 1/8"	.10
5016H	A	1/2"	2 1/8"	.11
5018H	A	9/16"	2 1/8"	.14
5020H	A	5/8"	2 1/8"	.16
5022H	A	11/16"	2 1/8"	.21
5026HPA		13/16"	2 17/32"	.24
5026RA		Rubber insert for 5026 HP		

UNIVERSAL SOCKETS

Double Hexagon (12-Point)

5273	3/8"	1 35/64"	.09
5274	7/16"	1 35/64"	.09
5275	1/2"	1 41/64"	.10
5276	9/16"	1 25/32"	.11
5277	5/8"	1 29/32"	.12
5278	11/16"	1 63/64"	.13
5279	3/4"	2 3/64"	.15

Hexagon (6-Point)

5274H	7/16"	1 35/64"	.09
5275H	1/2"	1 41/64"	.09
5276H	9/16"	1 25/32"	.11

For power sockets see pages 51 thru 56.

SCREWDRIVER SOCKETS

NO.	SIZE OF BIT	LENGTH	WT., LBS.
5235	Clutch Hd. 1/4" Bit	2"	.08
5236	Clutch Hd. 5/16" Bit	2"	.07
5237	Clutch Hd. 3/8" Bit	2"	.07
5240	5/16" x .040"	3 3/32"	.08
5241	Phillips No. 2	1 5/8"	.05
5242	Phillips No. 3	1 5/8"	.05
5243	Phillips No. 4	1 5/8"	.06
5244	11/16" x .116"	1 1/32"	.08
5246	1/4" x .030"	1 7/8"	.06

HOLLOW HEAD SCREW SOCKETS

*NO.	HEX. BIT SIZE	USABLE BIT LENGTH	OVER-ALL LGTH.	WT., LBS.	BIT ONLY NO.
★4990 1/8	1/8"	1"	2 1/16"	.05	4980
★4990 5/32	5/32"	1"	2 1/16"	.06	4981
★4990 3/16	3/16"	1"	2 1/16"	.06	4982
■4990 3/16L	3/16"	2"	3 1/16"	.07	4983
★4990 7/32	7/32"	1"	2 5/32"	.08	4984
★4990 1/4	1/4"	1"	2 5/32"	.09	4985
■4990 1/4L	1/4"	1 1/2"	2 21/32"	.10	4986
★4990 5/16	5/16"	1"	2 1/4"	.11	4987
★4990 3/8	3/8"	1"	2 1/4"	.13	4988
■4990 3/8L	3/8"	2 11/16"	3 15/16"	.14	4989

★See Set No. 4900A, Page 62.

Larger size bits, ½" drive, see page 44.

*Catalog Number Includes Bit-Holding Socket and Bit. Sockets Without Bits Are Not Available. Replacement Bits Only May Be Ordered by the Numbers in the Right Column.

■4990 3/16L is for GM Automatic Transmissions, 4990 1/4L is for Chevrolet Camber Adjustment, and 4990 3/8L is for Ford brakes and Ford, Edsel, Mercury differential filler plugs.

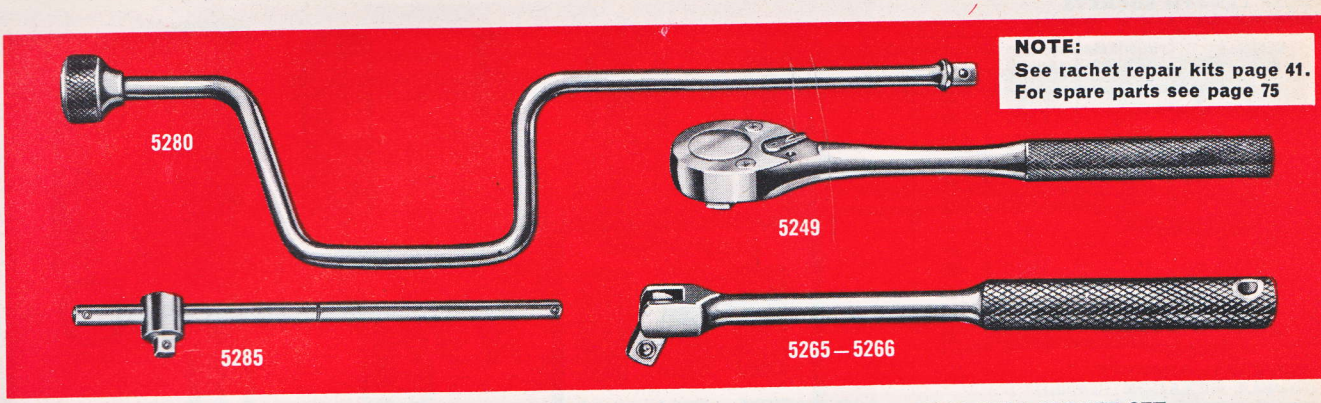
CROWFOOT WRENCHES

Reach starters. Do jobs that normally need special tools.

NO.	NOMINAL OPENING SIZE	TOTAL LENGTH	WT., LBS.
4912	3/8"	1 1/8"	.05
4914	7/16"	1 1/8"	.05
4916	1/2"	1 1/8"	.05
4918	9/16"	1 13/32"	.08
4920	5/8"	1 3/8"	.08
4922	11/16"	1 3/8"	.08
4924	3/4"	1 21/32"	.14
4926	13/16"	1 21/32"	.12
4928	7/8"	1 21/32"	.12
4932	1"	1 7/8"	.12
4940	1 1/4"	2 1/32"	.23
4944	1 3/8"	2"	.21

For standard nut and bolt sizes corresponding to nominal socket openings see page 76.

3/8" SQUARE DRIVE CUB SOCKET WRENCH HANDLES, ATTACHMENTS AND SETS



NOTE:
See rachet repair kits page 41.
For spare parts see page 75

Proto handles and attachments permit a wide variety of drive combinations for fast and easy running of nuts and bolts on every job. They're made of special alloy steel, chrome plated, built for years of service.

Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

HANDLES

NO.	DESCRIPTION	LENGTH	WT., LBS.
5249	Reversible Ratchet	7"	.55
5265	Hinge Handle	7 3/8"	.39
5266	Hinge Handle	12"	.83
5280	Speed Handle	16 7/8"	.83
5285	Sliding Bar T Handle	8"	.31

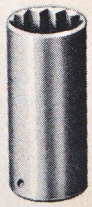
NO. 5000B DEEP SOCKET SET

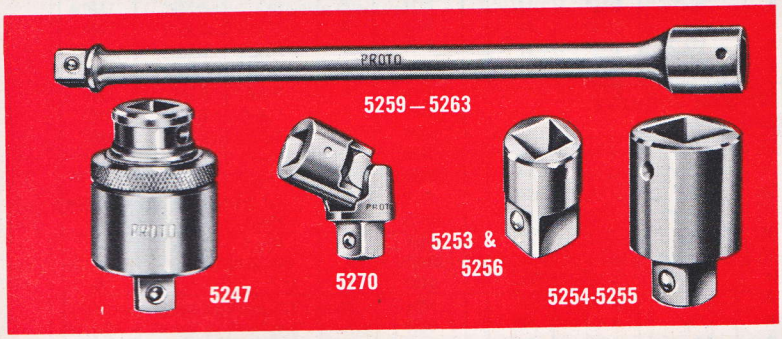
Includes the following nine extra deep 12-point sockets, packed in cardboard box.

(One socket illustrated.) ➔

NO.	OPENING SIZE
5012	3/8"
5014	7/16"
5016	1/2"
5018	9/16"
5020	5/8"

NO.	OPENING SIZE
5022	11/16"
5024	3/4"
5026	13/16"
5028	7/8"
Weight, 1.60 Lbs.	





Fedl. Specs.: GGG-W-641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

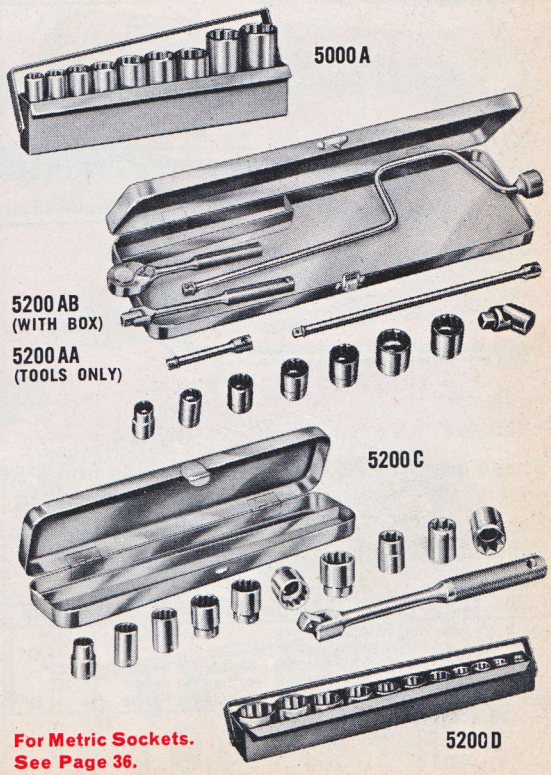
ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
5247	Rachetor	2"	.33
5256	Adapter, 1/4" Female, 3/8" Male	15/16"	.03
5255	Adapter, 3/8" Female, 1/4" Male	1 1/32"	.05
5253	Adapter, 3/8" Female, 1/2" Male	1 5/32"	.07
5254	Adapter, 1/2" Female, 3/8" Male	1 13/32"	.10
5259	Extension Bar	1 3/4"	.09
5260	Extension Bar	3 1/2"	.13
5261	Extension Bar	7 1/2"	.25
5262	Extension Bar	12"	.38
5263	Extension Bar	17 3/16"	.53
5270	Universal Joint	1 11/16"	.10

CONTENTS OF SETS 5000A, 5200AA, 5200AB, 5200C & 5200D

NO.	DESCRIPTION	SET 5000A	SET 5200AA	SET 5200AB	SET 5200C	SET 5200D
5012	Deep Socket, 12-Point, 3/8" Opening	1				
5014	Deep Socket, 12-Point, 7/16" Opening	1				
5016	Deep Socket, 12-Point, 1/2" Opening	1				
5018	Deep Socket, 12-Point, 9/16" Opening	1				
5020	Deep Socket, 12-Point, 5/8" Opening	1				
5022	Deep Socket, 12-Point, 11/16" Opening	1				
5024	Deep Socket, 12-Point, 3/4" Opening	1				
5026	Deep Socket, 12-Point, 13/16" Opening	1				
5028	Deep Socket, 12-Point, 7/8" Opening	1				
5096	Metal Tray	1				
5210	Socket, 12-Point, 5/16" Opening					1
5212	Socket, 12-Point, 3/8" Opening		1	1	1	1
5212S	Socket, 8-Point, 3/8" Opening				1	
5214	Socket, 12-Point, 7/16" Opening		1	1	1	1
5214S	Socket, 8-Point, 7/16" Opening				1	
5216	Socket, 12-Point, 1/2" Opening		1	1	1	1
5216S	Socket, 8-Point, 1/2" Opening				1	
5218	Socket, 12-Point, 9/16" Opening		1	1	1	1
5219	Socket, 12-Point, 19/32" Opening					1
5220	Socket, 12-Point, 5/8" Opening		1	1	1	1
5222	Socket, 12-Point, 11/16" Opening		1	1	1	1
5224	Socket, 12-Point, 3/4" Opening		1	1	1	1
5226	Socket, 12-Point, 13/16" Opening					1
5228	Socket, 12-Point, 7/8" Opening					1
5249	Reversible Rachet, 7" Long		1	1		
5260	Extension Bar, 3 1/2" Long		1	1		
5262	Extension Bar, 12" Long		1	1		
5265	Hinge Handle, 7 3/8" Long		1	1	1	
5270	Universal Joint		1	1		
5280	Speed Handle, 16 7/8" Long		1	1		
5292	Metal Tray					1
5294	Box 10 1/4" x 2 1/4" x 1 1/4"				1	
5295	Box 18 1/2" x 5 1/4" x 1 1/2"			1		
	Weight of Sets	2.02 Lbs.	2.69 Lbs.	4.6 Lbs.	2.1 Lbs.	1.12 Lbs.

Boxes available separately, see page 70



For Metric Sockets. See Page 36.

1/2" SQUARE DRIVE STANDARD SOCKET WRENCHES AND HANDLES

PROTO TOOLS — PROfessional QUALITY TOols

DEEP LENGTH SOCKETS
DOUBLE HEXAGON (12-POINT)

NEW NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5316	B	1/2"	3 1/4"	.25
5318	B	9/16"	3 1/4"	.27
5320	B	5/8"	3 1/4"	.28
5322	A	11/16"	3 1/4"	.34
5324	A	3/4"	3 1/4"	.40
†5326	A	13/16"	3 1/4"	.40
5328	A	7/8"	3 1/4"	.44
5330	A	15/16"	3 1/4"	.52
5332	A	1"	3 1/4"	.60
5334	A	1 1/16"	3 1/4"	.68
5336	A	1 1/8"	3 1/4"	.75
5340	A	1 1/4"	3 1/4"	.92

UNIVERSAL SOCKETS
DOUBLE HEXAGON (12-POINT)

5475	B	1/2"	2 9/64"	.25
5476	B	9/16"	2 11/64"	.24
5477	B	5/8"	2 19/64"	.25

† Use hexagon (6-point) deep length socket wrenches Nos. 5326H or 5326HPA, which have maximum clearance for 14 mm. spark plugs.

SCREWDRIVER SOCKETS
Used on drag links and large screws of many assemblies.

NO.	BIT SIZE	TOTAL LENGTH	WT., LBS.
5444	3/4" x .115"	1 1/4"	.14
5446	15/16" x .154"	1 1/4"	.20

HOLLOW HEAD SCREW SOCKETS

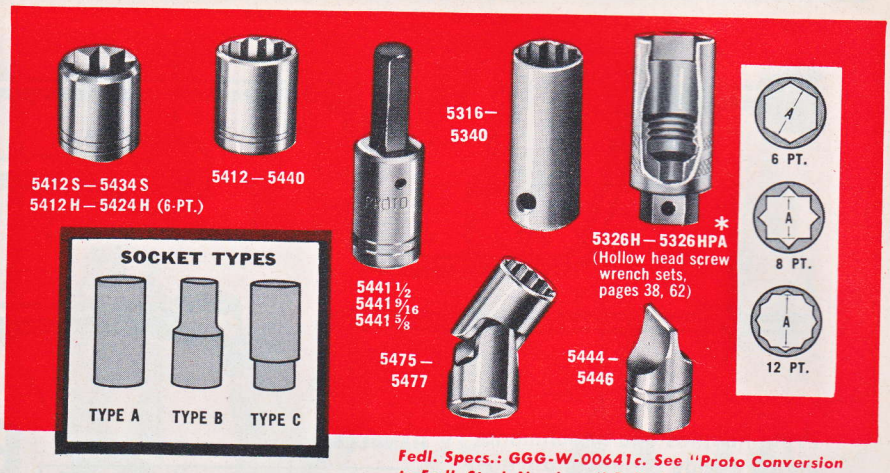
HEX BIT NO.	HEX BIT SIZE	TOTAL LENGTH	WT., LBS.	BIT ONLY NO.
*5441 1/2	1/2"	3 1/8"	.37	5441 1/2B
*5441 9/16	9/16"	3 3/8"	.48	5441 9/16B
*5441 5/8	5/8"	3 3/8"	.52	5441 5/8B

* See Set No. 4900A. Page 62.

DEEP LENGTH SOCKETS
HEXAGON (6-POINT)

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
†5326H	13/16"	3 1/4"	.32
5326HPA	13/16"	2 17/32"	.22

* No. 5326HPA—special type with rubber insert for holding plug is listed on Page 38. It helps prevent burning of fingers and speeds changing spark plugs.



Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PROTOLOY® special alloy steel, chrome plated, scientifically heat treated

REGULAR LENGTH SOCKETS
HEXAGON (6-POINT)

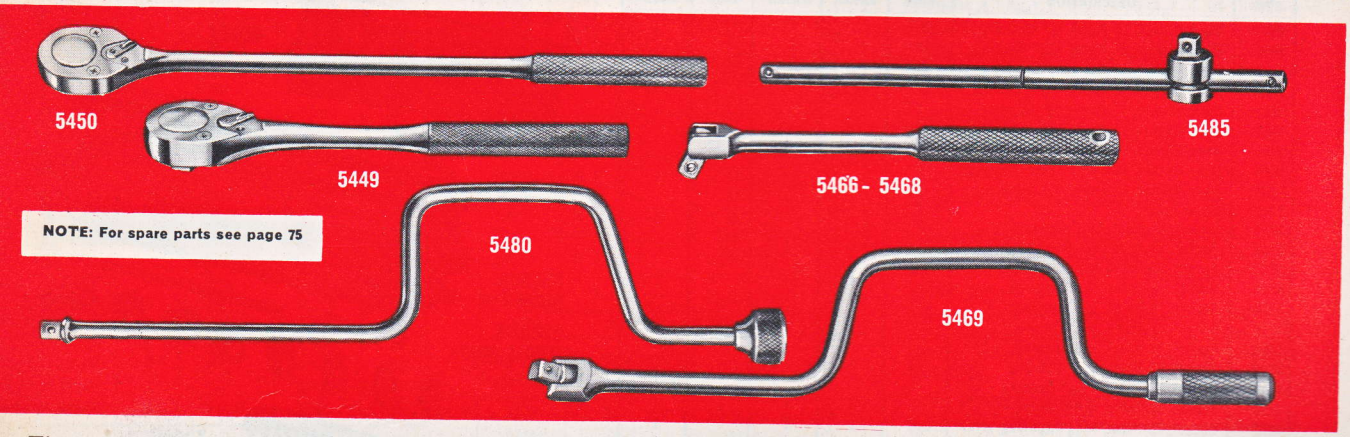
NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5412H	B	3/8"	1 7/16"	.09
5414H	B	7/16"	1 7/16"	.10
5416H	B	1/2"	1 7/16"	.12
5418H	B	9/16"	1 1/2"	.13
5420H	A	5/8"	1 1/2"	.12
5422H	A	11/16"	1 1/2"	.17
5424H	A	3/4"	1 1/2"	.21

REGULAR LENGTH SOCKETS
DOUBLE SQUARE (8-POINT)

5412S	B	3/8"	1 7/16"	.12
5414S	B	7/16"	1 7/16"	.14
5416S	A	1/2"	1 7/16"	.14
5418S	A	9/16"	1 1/2"	.20
5420S	A	5/8"	1 1/2"	.23
5422S	A	11/16"	1 1/2"	.30
5424S	A	3/4"	1 1/2"	.37
5426S	A	13/16"	1 5/8"	.42
5428S	A	7/8"	1 5/8"	.52
5432S	A	1"	1 3/4"	.76
5434S	A	1 1/16"	1 3/4"	.91

REGULAR LENGTH SOCKETS
DOUBLE HEXAGON (12-POINT)

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5412	B	3/8"	1 7/16"	.09
5414	B	7/16"	1 7/16"	.09
5416	B	1/2"	1 7/16"	.10
5418	B	9/16"	1 1/2"	.13
5419	B	19/32"	1 1/2"	.13
5420	A	5/8"	1 1/2"	.15
5421	A	21/32"	1 1/2"	.15
5422	A	11/16"	1 1/2"	.17
5424	A	3/4"	1 1/2"	.20
5425	A	25/32"	1 1/2"	.22
5426	A	13/16"	1 1/2"	.20
5428	A	7/8"	1 9/16"	.30
5429	A	29/32"	1 9/16"	.34
5430	A	15/16"	1 9/16"	.33
5431	A	31/32"	1 9/16"	.34
5432	A	1"	1 9/16"	.38
5434	A	1 1/16"	1 5/8"	.42
5436	A	1 1/8"	1 3/4"	.50
5438	A	1 3/16"	1 3/4"	.56
5440	A	1 1/4"	1 3/4"	.61



These husky PROTO handles are made from PROTOLOY® special alloy steel and are chrome plated.
Because of the several types available all kinds of jobs can be handled efficiently.

NOTE: See page 41 for Ratchet Repair Kit.

Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

HANDLES

NO.	DESCRIPTION	LENGTH	WT., LBS.
5449	Reversible Ratchet	10"	1.28
5450	Long Reversible Ratchet	15 3/4"	1.82
5466	Hinge Handle, with Hole for Inserting Pin Handle	10"	1.16
5467	Hinge Handle, with Hole for Inserting Pin Handle	15"	1.56
5468	Hinge Handle, with Hole for Inserting Pin Handle	17 7/8"	1.67

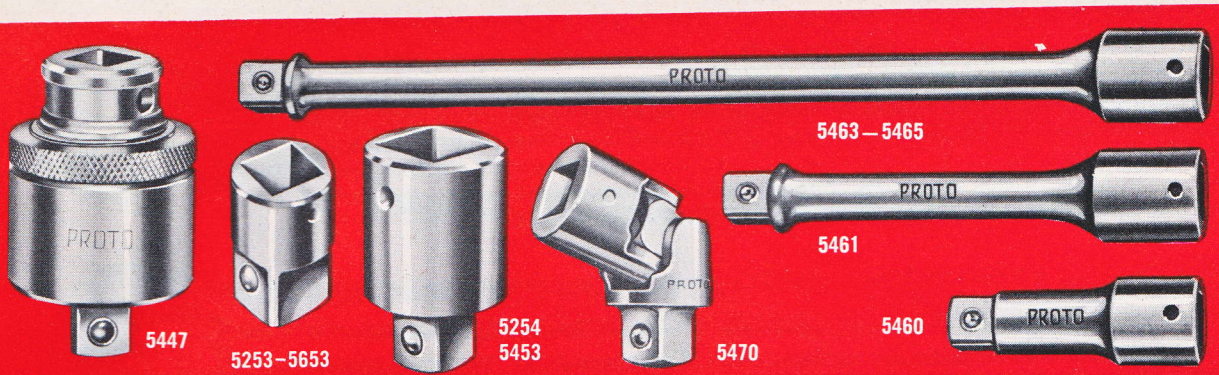
HANDLES (cont.)

NO.	DESCRIPTION	LENGTH	WT., LBS.
5469	Speed Hinge Handle, 9/16" Stock, 6 1/2" Swing Diam., Ball-Brg. Knurled Grip	18"	1.86
5480	Speed Handle, 1/2" Stock, 7" Swing Diam., Ball-Bearing Knurled Grip	18"	1.52
5485	Sliding Bar T Handle, with Ball to Hold Plug in Tee or Offset Position	12 15/16"	.94

NOTE: For metric sockets see page 36. For thin nose connecting rod sockets see page 38. For power sockets, pages 51 – 56.

1/2" SQUARE DRIVE STANDARD SOCKET WRENCH ATTACHMENTS AND SETS

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



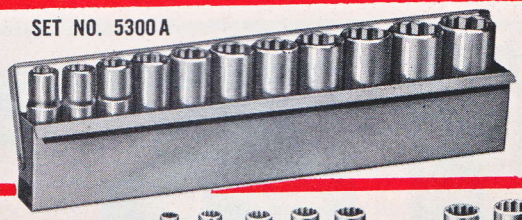
Made from PROTOLOY® special alloy steel, chrome plated, designed for precise and complete interchangeability with range of combinations for special jobs.

ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
5253	Adapter, 3/8" Female, 1/2" Male	1 5/32"	.07
5254	Adapter, 1/2" Female, 3/8" Male	1 25/64"	.10
5653	Adapter, 1/2" Female, 3/4" Male	1 1/2"	.22
5453	Adapter, 3/4" Female, 1/2" Male	2 1/8"	.38
● 5447	"Ratchetor" Ratcheting Attachment	2 9/16"	.73
5460	Extension Bar	2 1/2"	.24
5461	Extension Bar	5"	.35
5463	Extension Bar	10"	.63
5464	Extension Bar	18"	1.03
5465	Extension Bar	36"	3.1
5470	Universal Joint	2 29/64"	.26

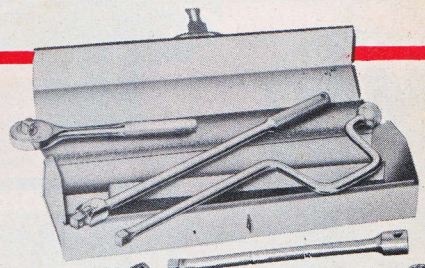
● For description of ratchetor see bottom of page 46.

SET NO. 5300A

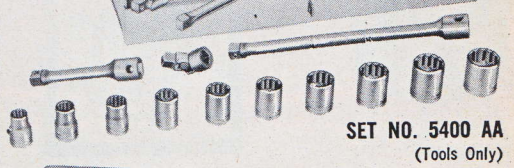


SET NO. 5300B

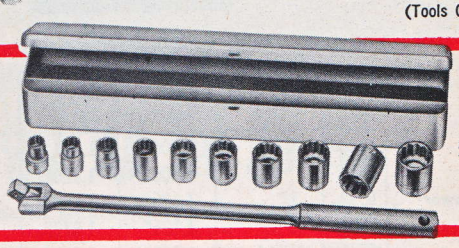
SET NO. 5400 AB
(Tools and Box)



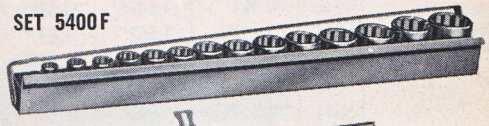
SET NO. 5400 AA
(Tools Only)



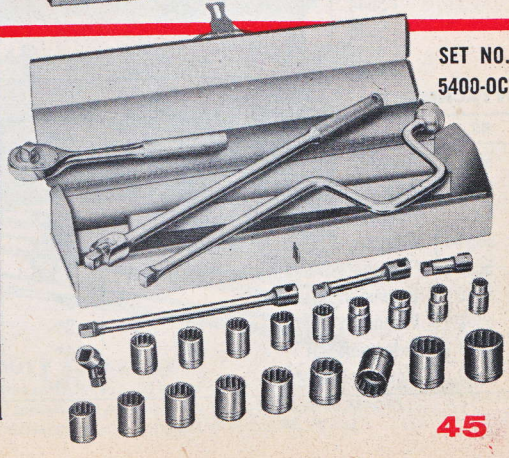
SET NO. 5400C



SET 5400F



SET NO. 5400-OC



CONTENTS OF SETS

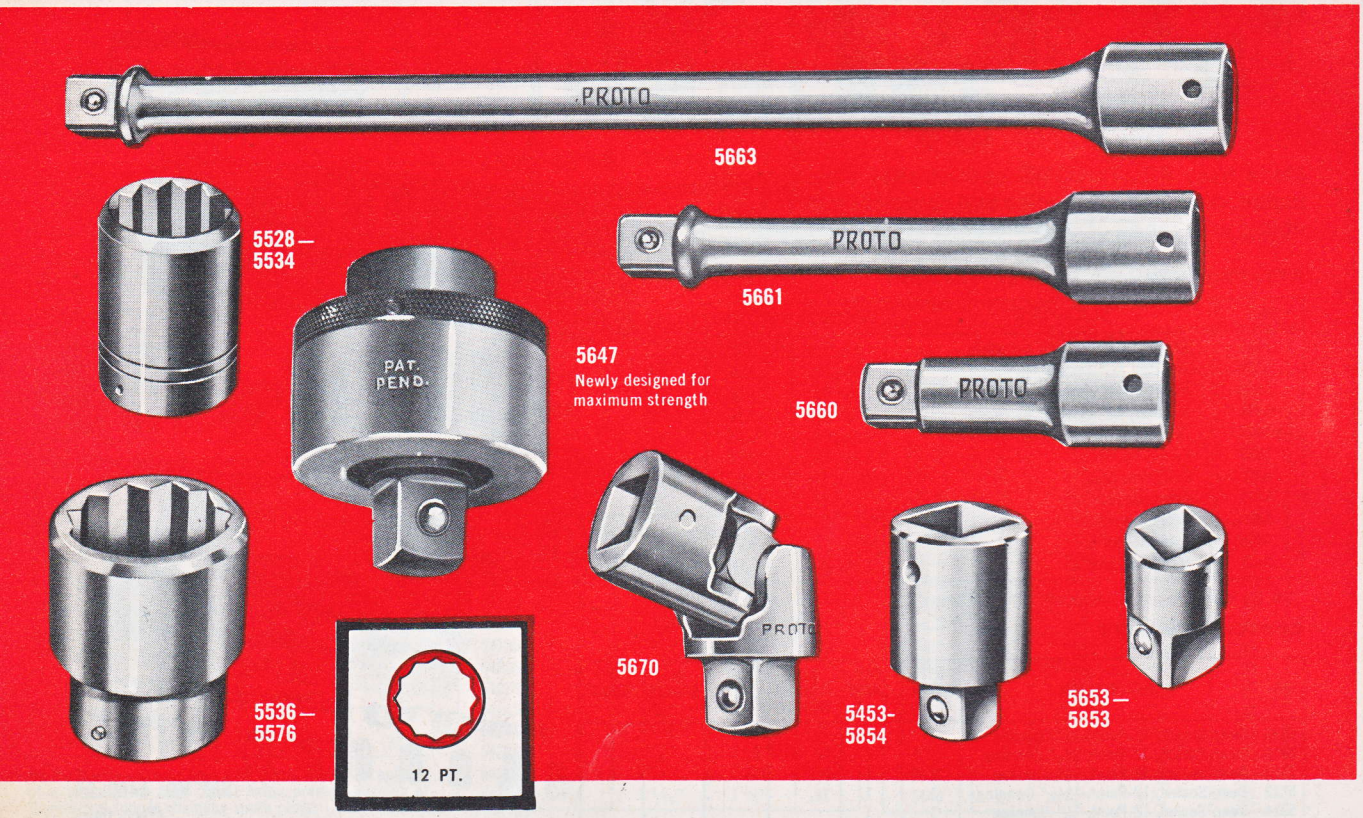
NO.	DESCRIPTION	SET 5300-A	SET 5300-B	*SETS 5400-AB 5400-AA	SET 5400-C	SET 5400-OC	SET 5400-F
5316	Deep Socket, 12-Point, 1/2" Opening	1	1				
5318	Deep Socket, 12-Point, 9/16" Opening	1	1				
5320	Deep Socket, 12-Point, 5/8" Opening	1	1				
5322	Deep Socket, 12-Point, 11/16" Opening	1	1				
5324	Deep Socket, 12-Point, 3/4" Opening	1	1				
5326	Deep Socket, 12-Point, 13/16" Opening	1	1				
5328	Deep Socket, 12-Point, 7/8" Opening	1	1				
5330	Deep Socket, 12-Point, 15/16" Opening	1	1				
5332	Deep Socket, 12-Point, 1" Opening	1	1				
5334	Deep Socket, 12-Point, 1 1/16" Opening	1					
5336	Deep Socket, 12-Point, 1 1/8" Opening	1					
5393	Metal Tray (.94 lbs.)	1					
5414	Socket, 12-Point, 7/16" Opening			1	1	1	1
5416	Socket, 12-Point, 1/2" Opening			1	1	1	1
5418	Socket, 12-Point, 9/16" Opening			1	1	1	1
5419	Socket, 12-Point, 19/32" Opening					1	1
5420	Socket, 12-Point, 5/8" Opening			1	1	1	1
5421	Socket, 12-Point, 11/16" Opening					1	
5422	Socket, 12-Point, 11/16" Opening			1	1	1	1
5424	Socket, 12-Point, 3/4" Opening			1	1	1	1
5425	Socket, 12-Point, 25/32" Opening					1	1
5426	Socket, 12-Point, 13/16" Opening			1	1	1	1
5428	Socket, 12-Point, 7/8" Opening			1	1	1	1
5430	Socket, 12-Point, 15/16" Opening			1	1	1	1
5431	Socket, 12-Point, 31/32" Opening					1	
5432	Socket, 12-Point, 1" Opening			1	1	1	1
5434	Socket, 12-Point, 1 1/16" Opening					1	1
5436	Socket, 12-Point, 1 1/8" Opening					1	1
5438	Socket, 12-Point, 1 3/16" Opening					1	
5440	Socket, 12-Point, 1 1/4" Opening					1	1
5449	Reversible Ratchet, 10" Long			1		1	
5460	Extension Bar, 2 1/2" Long					1	
5461	Extension Bar, 5" Long			1		1	
5463	Extension Bar, 10" Long			1		1	
5467	Hinge Handle, 15" Long			1	1		
5468	Hinge Handle, 17 7/8" Long					1	
5470	Universal Joint			1		1	
5480	Speed Handle, 18" Long			1		1	
5493	Metal Tray (1.0 lbs.)						1
5494	Steel Box 17"x 3"x 2" (1.86 lbs.)				1	1	
5496	Hip Roof Box, 18 1/2" x 5 3/4" x 3 5/8" (Wt. 3 Lbs. 4 Oz.)			1	1		
	(Boxes available separately. See Page 70.) Weight of Sets, Lbs.	5.80	3.4	12.0	5.8	15.0	4.90

* 5400-AA is same as 5400-AB but without metal box.

3/4" SQUARE DRIVE HEAVY-DUTY SOCKET WRENCHES AND ATTACHMENTS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

PROTO sockets are made from PROTOLOY® special alloy steel, chrome plated, and have thin walls to get at hard-to-reach nuts. They are used by mechanics and industrial workers who need strength, power, speed and safe operation on really tough jobs. They are essential for the maintenance and installation of heavy machinery and for the repair of trucks, buses, ground service equipment, automobiles, tractors and farm implements. They provide maximum strength with minimum weight and are the perfect wrenches to break loose frozen bolts and nuts on heavy equipment.



REGULAR LENGTH SOCKETS DOUBLE HEXAGON (12-POINT)

For Power and Impact Sockets, See Pages 51-56.

NO.	NOMINAL OPENING SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5528	7/8"	1.000"	1.313"	2"	.31
5530	15/16"	1.000"	1.420"	2"	.38
5532	1"	1.125"	1.490"	2"	.47
5534	1 1/16"	1.125"	1.572"	2"	.49
5536	1 1/8"	1.562"	1.635"	2 3/16"	.60
5538	1 3/16"	1.562"	1.697"	2 1/4"	.67
5540	1 1/4"	1.562"	1.825"	2 1/4"	.71
5542	1 5/16"	1.750"	1.885"	2 5/16"	.96
5544	1 3/8"	1.875"	1.947"	2 5/16"	1.00
5546	1 7/16"	1.875"	2.010"	2 3/8"	1.14
5548	1 1/2"	2.750"	2.072"	2 1/2"	1.17

NO.	NOMINAL OPENING SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5550	1 9/16"	2.750"	2.135"	2 5/8"	1.29
5552	1 5/8"	2.750"	2.260"	2 5/8"	1.49
5554	1 11/16"	2.750"	2.385"	2 3/4"	1.80
5556	1 3/4"	2.750"	2.385"	2 3/4"	1.80
5558	1 13/16"	2.750"	2.510"	2 7/8"	1.97
5560	1 7/8"	2.750"	2.635"	3"	2.31
5564	2"	2.750"	2.760"	3 1/8"	2.77
5568	2 1/8"	3.000"	2.947"	3 1/4"	3.10
5570	2 3/16"	3.000"	3.010"	3 1/4"	3.25
5572	2 1/4"	3.125"	3.156"	3 3/8"	3.50
5576	2 3/8"	3.125"	3.281"	3 5/8"	3.62

ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
5653	Adapter, 1/2" Female, 3/4" Male	1 1/2"	.22
5453	Adapter, 3/4" Female, 1/2" Male	2"	.38
5853	Adapter, 3/4" Female, 1" Male	2 1/4"	.70
5854	Adapter, 1" Female, 3/4" Male	2 5/8"	1.34
* 5647	"Ratchetor" Ratcheting Attachment	3 3/16"	2.5
5660	Extension Bar	5"	.91
5661	Extension Bar	8"	1.36
5663	Extension Bar	16"	2.2
5670	Universal Joint	3 9/16"	.96

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

* Converts any 3/4" square drive non-ratcheting handle or attachment into a ratcheting device. It is used mainly with a hinge handle, hinge handle plus extension bar or a torque wrench. The "Ratchetor" is a simple, positive device, huskily built for high torque strength, yet compact for ample clearance. It has very little backdrag.

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

3/4" SQUARE DRIVE HEAVY-DUTY SOCKET WRENCH HANDLES AND SETS

Made from fine PROTOLOY® steel, heat treated scientifically to provide great strength and toughness, and chrome plated to prevent rust and corrosion. PROTO ratchets are famous for simple, trouble-free mechanism.

CONTENTS OF NO. 5500 NR SET

NO.	DESCRIPTION
5534	Socket, 12-Point, 1 1/16" Opening
5536	Socket, 12-Point, 1 1/8" Opening
5540	Socket, 12-Point, 1 1/4" Opening
5542	Socket, 12-Point, 1 5/16" Opening
5546	Socket, 12-Point, 1 7/16" Opening
5548	Socket, 12-Point, 1 1/2" Opening
5552	Socket, 12-Point, 1 5/8" Opening
5556	Socket, 12-Point, 1 3/4" Opening
5649	Reversible Ratchet, 20" long
5661	Extension Bar, 8" Long
5685	Sliding Bar Handle, 18 1/2"
5695	Steel Box, 22 1/2" x 8" x 3 3/4"

CONTENTS OF NO. 5500 A SET

NO.	DESCRIPTION
5528	Socket, 12-Point, 7/8" Opening
5530	Socket, 12-Point, 15/16" Opening
5532	Socket, 12-Point, 1" Opening
5534	Socket, 12-Point, 1 1/16" Opening
5536	Socket, 12-Point, 1 1/8" Opening
5538	Socket, 12-Point, 13/16" Opening
5540	Socket, 12-Point, 1 1/4" Opening
5542	Socket, 12-Point, 1 5/16" Opening
5544	Socket, 12-Point, 1 3/8" Opening
5546	Socket, 12-Point, 1 7/16" Opening
5548	Socket, 12-Point, 1 1/2" Opening
5550	Socket, 12-Point, 1 9/16" Opening
5552	Socket, 12-Point, 1 5/8" Opening
5554	Socket, 12-Point, 1 11/16" Opening
5556	Socket, 12-Point, 1 3/4" Opening
5558	Socket, 12-Point, 1 13/16" Opening
5560	Socket, 12-Point, 1 7/8" Opening
5564	Socket, 12-Point, 2" Opening
5568	Socket, 12-Point, 2 1/8" Opening
5570	Socket, 12-Point, 2 3/16" Opening
5572	Socket, 12-Point, 2 1/4" Opening
5576	Socket, 12-Point, 2 3/8" Opening
5649	Reversible Ratchet, 20" Long
5660	Extension Bar, 5" Long
5661	Extension Bar, 8" Long
5663	Extension Bar, 16" Long
5668	Hinge Handle, 20 7/8" Long
5670	Universal Joint
5685	Sliding Bar Handle, 18 1/2"
5696	Steel Box, 23 1/2" x 9 1/4" x 4"

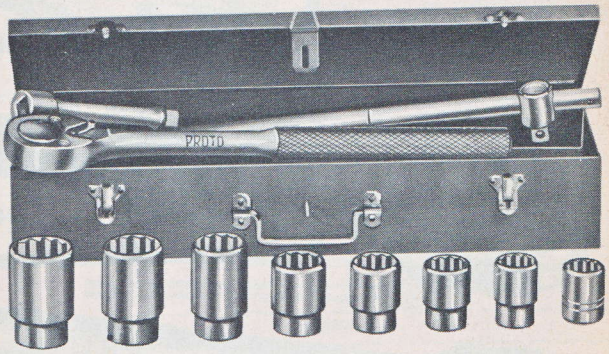
*Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

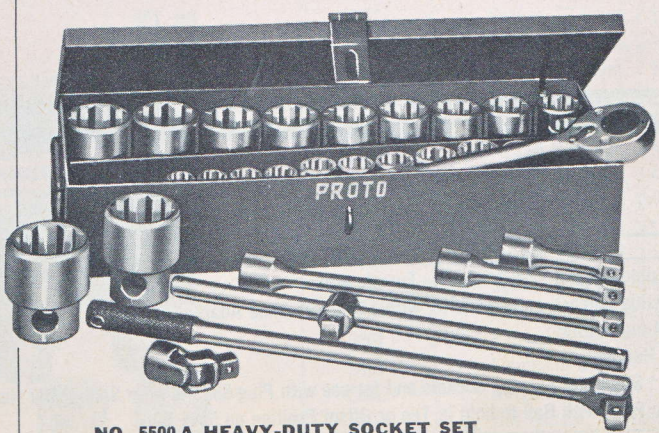
HANDLES

NO.	DESCRIPTION	LGTH.	WT., LBS.
5649*	Reversible Ratchet	20"	6.2
5668	Hinge Handle, with Hole for inserting Pin Handle	22"	3.8
5668PH	Pin Handle, 1/2" Stock	12"	.62
5685	Sliding Bar T Handle, with Ball to hold Plug in Tee or Offset Position	18 1/2"	3.8
5686	Ell Handle	16"	4.2

NOTE: For spare parts listing see page 75.



NO. 5500 NR BASIC HEAVY-DUTY SOCKET SET
Basic set of eight most-used sockets and attachments for work on heavy machinery and automatic equipment. 1 1/16" thru 1 3/4" openings. Wt., 30 Lbs.

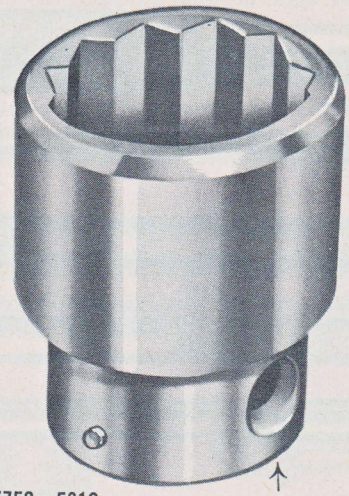


NO. 5500 A HEAVY-DUTY SOCKET SET
Designed for tough service; this set contains a full line of 3/4" drive sockets; is ideal for all types of heavy work. It includes 22 sockets with openings from 7/8" to 2 3/8", three handles, three extension bars and a universal joint in a rugged steel box. Wt., 75 Lbs.

1" SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCHES AND HANDLES

PROTO sockets are made from PROTOLOY® special alloy steel, chrome plated. They are specially heat treated and designed for great strength, for extra tough service. Streamlined to reduce weight.

A big feature and safety factor is positive locking of socket to handle or attachment. Each male drive plug has a spring-pellet that snaps into a hole in the socket, acting as a retaining pin. To release, simply push pin provided in each socket.



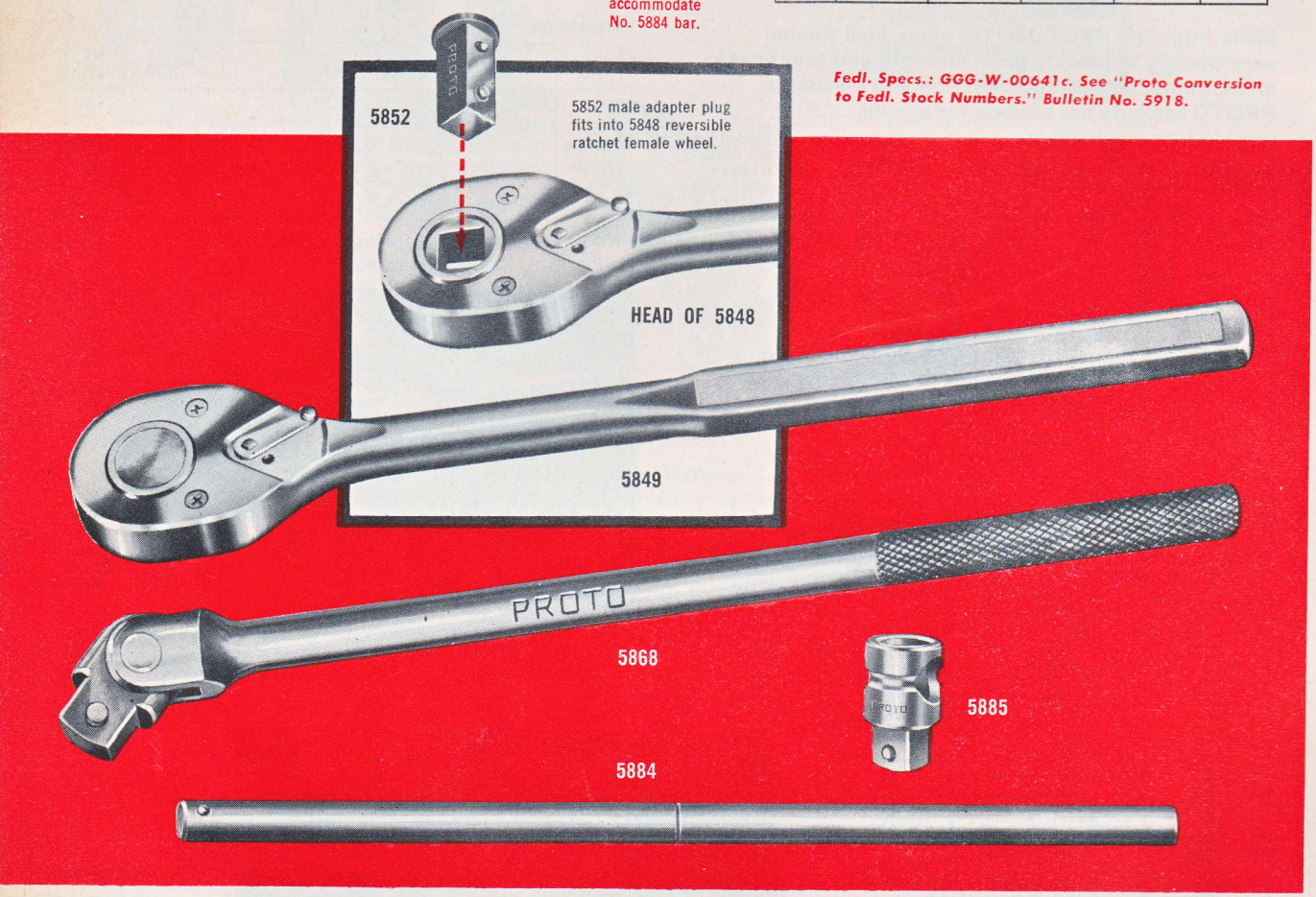
5752—5812

NOTE: Hole drilled through socket to accommodate No. 5884 bar.

REGULAR LENGTH SOCKETS
DOUBLE HEXAGON (12-POINT)

NO.	NOMINAL OPEN. SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5752	1 5/8"	2.250"	2.406"	3 1/4"	1.73
5758	1 13/16"	2.375"	2.531"	3 5/16"	1.85
5760	1 7/8"	2.406"	2.593"	3 5/16"	1.94
5764	2"	2.468"	2.781"	3 7/16"	2.2
5770	2 3/16"	2.781"	3.031"	3 3/4"	3.1
5772	2 1/4"	2.812"	3.156"	3 13/16"	3.4
5776	2 3/8"	2.937"	3.271"	3 15/16"	3.9
5780	2 1/2"	3.000"	3.531"	4"	4.9
5782	2 9/16"	3.000"	3.531"	4"	4.6
5784	2 5/8"	3.125"	3.656"	4 1/8"	5.2
5788	2 3/4"	3.375"	3.843"	4 3/8"	6.2
5794	2 15/16"	3.625"	4.093"	4 5/8"	7.7
5796	3"	3.500"	4.135"	4 5/8"	8.0
5800	3 1/8"	3.875"	4.385"	4 7/8"	9.6
5812	3 1/2"	4.500"	4.750"	5 13/32"	15

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



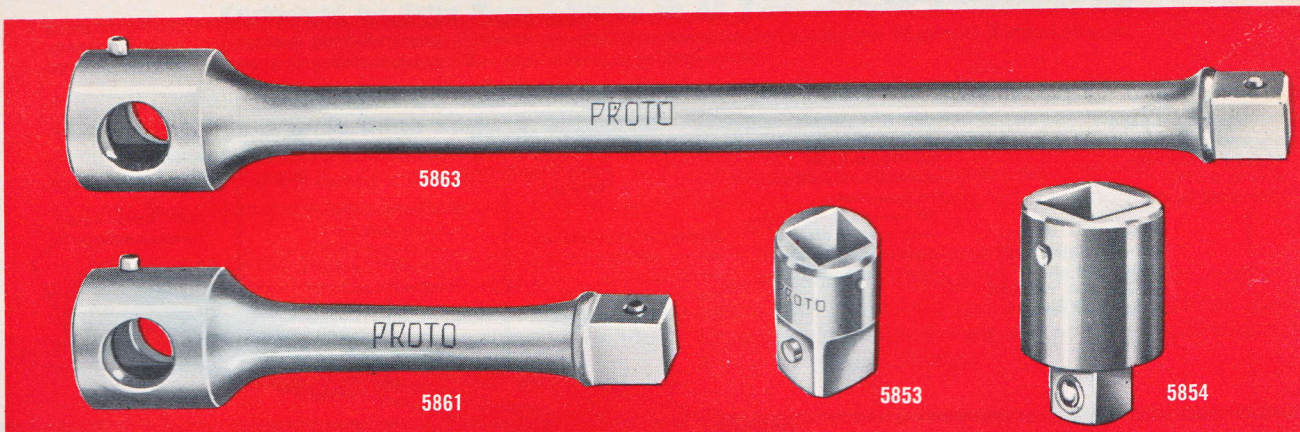
HANDLES

NO.	DESCRIPTION	LENGTH	WT., LBS.
5848	* Reversible Ratchet with 1" Square Female Wheel	26"	11
5849	* Reversible Ratchet, same as 5848, with 1" Square Male Adapter Plug 5852	26"	12
5852	Male Adapter Plug		.72
5868	Hinge Handle	26"	7.7
5884	Bar, 1" Stock, for Turning Sockets and for use with Plug 5885 to form Sliding Bar Handle	24"	5.3
5885	Sliding Plug, with Ball to hold in Tee or Offset Position on 5884 Bar	2 27/32"	1.40

* Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

NOTE: For spare parts listing see page 75.

1" SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCH ATTACHMENTS AND SETS



Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

Scientifically heat treated to provide great strength and toughness. Extra heavy-duty sockets and attachments have many applications in refineries, shipyards, power plants, railroad repair shops, plants with heavy machinery, etc.

ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LPS
5853	Adapter, ¾" Female, 1" Male	2 ⅜"	.70
5854	Adapter, 1" Female, ¾" Male	2 ⅝"	1.34
5861	Extension Bar, with 1" Hole in Female End for 5884 Bar	8"	2.5
5863	Extension Bar, with 1" Hole in Female End for 5884 Bar	17"	4.5

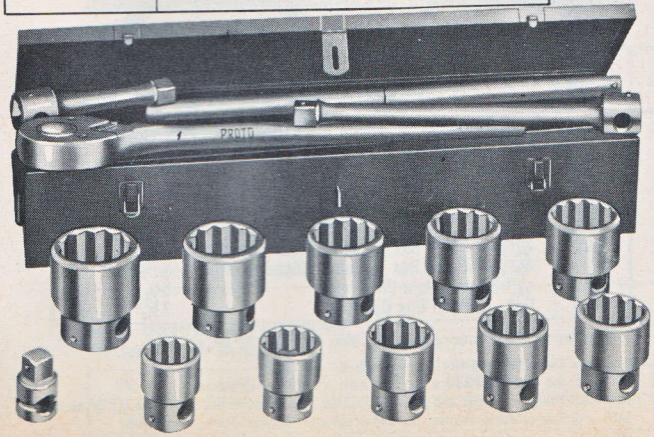
NO. 5700 AA EXTRA HEAVY-DUTY BASIC SOCKET SET

Ideal for really tough jobs that demand extra sturdy tools. It contains the ten most-used sockets, with openings from 1 ⅞" to 2 15/16", plus a reversible ratchet, a bar handle, a sliding drive plug and two extension bars in a heavy-gauge steel box. Weight, 82 Lbs.

CONTENTS OF NO. 5700 AA SET

NO.	DESCRIPTION
5760	Socket, 12-Point, 1 ⅞" Opening
5764	Socket, 12-Point, 2" Opening
5770	Socket, 12-Point, 2 3/16" Opening
5772	Socket, 12-Point, 2 ¼" Opening
5776	Socket, 12-Point, 2 ⅜" Opening
5780	Socket, 12-Point, 2 ½" Opening
5782	Socket, 12-Point, 2 9/16" Opening
5784	Socket, 12-Point, 2 ⅝" Opening
5788	Socket, 12-Point, 2 ¾" Opening
5794	Socket, 12-Point, 2 15/16" Opening
5849	Reversible Ratchet, 26" Long
5861	Extension Bar, 8" Long
5863	Extension Bar, 17" Long
5884	Bar Handle, 24" Long
5885	Drive Plug for 5884 Bar
5894	Steel Box, 30" x 8 ¼" x 5"

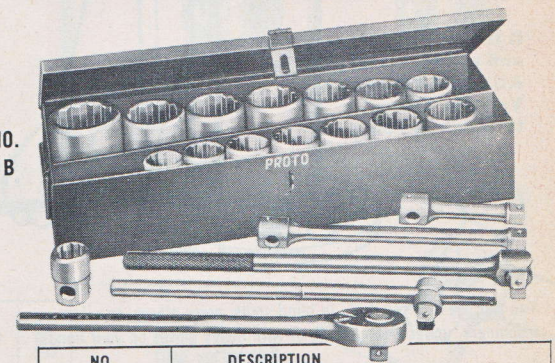
SET NO. 5700 AA



NO. 5700 B EXTRA HEAVY-DUTY SOCKET SET

Contains full line of 1" drive sockets and attachments for installation and repair of heavy equipment. It includes fifteen sockets with openings from 1 ⅝" to 3 ½", a reversible ratchet, a hinge handle, a bar handle, a sliding drive plug and two extension bars in a heavy-gauge steel box. Weight, 150 Lbs.

SET NO. 5700 B



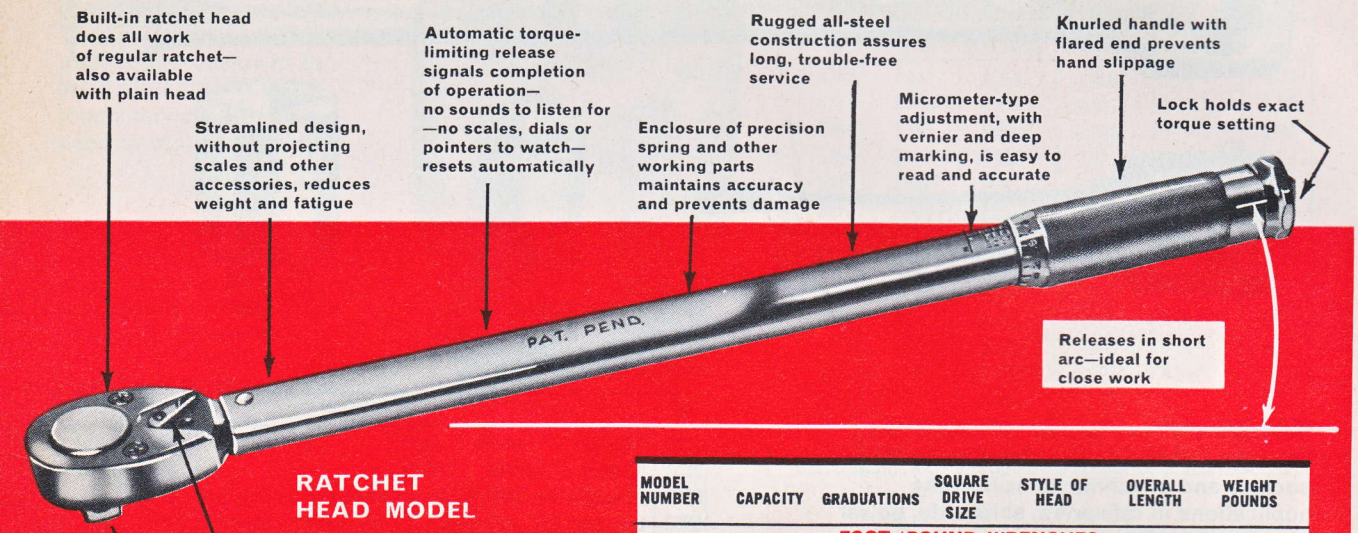
NO.	DESCRIPTION
5752	Socket, 12-Point, 1 ⅝" Opening
5758	Socket, 12-Point, 1 13/16" Opening
5760	Socket, 12-Point, 1 ⅞" Opening
5764	Socket, 12-Point, 2" Opening
5770	Socket, 12-Point, 2 3/16" Opening
5772	Socket, 12-Point, 2 ¼" Opening
5776	Socket, 12-Point, 2 ⅜" Opening
5780	Socket, 12-Point, 2 ½" Opening
5782	Socket, 12-Point, 2 9/16" Opening
5784	Socket, 12-Point, 2 ⅝" Opening
5788	Socket, 12-Point, 2 ¾" Opening
5794	Socket, 12-Point, 2 15/16" Opening
5796	Socket, 12-Point, 3" Opening
5800	Socket, 12-Point, 3 ⅛" Opening
5812	Socket, 12-Point, 3 ½" Opening
5849	Reversible Ratchet, 26" Long
5861	Extension Bar, 8" Long
5863	Extension Bar, 17" Long
5868	Hinge Handle, 26" Long
5884	Bar Handle, 24" Long
5885	Drive Plug for 5884 Bar
5895	Steel Box, 31" x 12" x 5 ¾"

TORQUE-LIMITING WRENCHES

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

The PROTO torquer is faster, more efficient and much easier to use than others because it uses positive torque-LIMITING action (instead of devices that merely INDICATE what the torque SHOULD be).

You can set the PROTO wrench at the torque you want. It releases AUTOMATICALLY when that torque point is reached. No guessing. No staring at hard-to-read dials, no listening for hard-to-hear signals, no over-torquing, no under-torquing, no clumsy gadgets sticking out in your way. It's a great time saver.

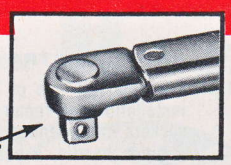


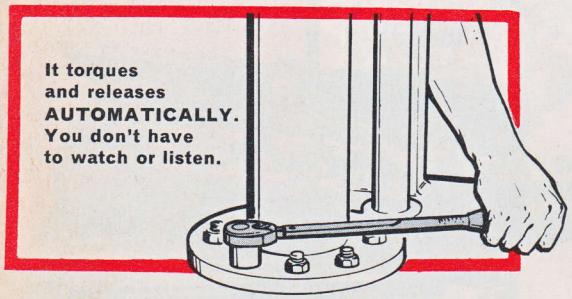
RATCHET HEAD MODEL

Square drive

Reversing lever

PLAIN HEAD MODEL

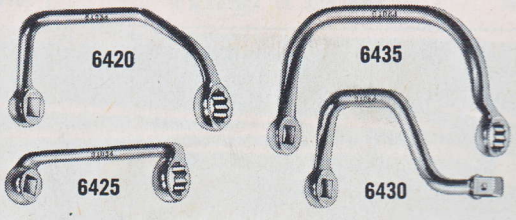




MODEL NUMBER	CAPACITY	GRADUATIONS	SQUARE DRIVE SIZE	STYLE OF HEAD	OVERALL LENGTH	WEIGHT POUNDS
FOOT / POUND WRENCHES						
6006	5-75	½ ft/lb	⅜"	Ratchet	13¾"	1 lb 8 oz
6008	5-75	½ ft/lb	½"	Ratchet	13¾"	1 lb 8 oz
6015	10-150	1 ft/lb	½"	Plain	17 7/16"	2 lb 5 oz
6016	10-150	1 ft/lb	½"	Ratchet	17⅞"	2 lb 5 oz
6017	100-500	5 ft/lb	¾"	Plain	37"	9 lb 3 oz
INCH / POUND WRENCHES						
6061	5-150	1 in/lb	¼"	Plain	9⅛"	15 oz
6062	5-150	2 in/lbs	¼"	Ratchet	10"	1 lb 3 oz
6063	5-150	2 in/lbs	⅜"	Plain	10"	1 lb 0 oz
6064	5-150	2 in/lbs	⅜"	Ratchet	10"	1 lb 8 oz
6065	100-750	5 in/lbs	⅜"	Plain	13 11/16"	1 lb 6½ oz
6066	100-750	5 in/lbs	⅜"	Ratchet	16 15/16"	1 lb .50
6069	700-1600	10 in/lbs	½"	Plain	16 15/16"	2 lb 5½ oz
6070	700-1600	10 in/lbs	½"	Ratchet	18½"	2 lb .42
6071	1000-4800	50 in/lbs	¾"	Plain	37"	9 lb 3 oz
METER / KILOGRAM WRENCHES						
6006M	10-M/Kg	0.1-M/Kg	19.525 mm	Ratchet	35.4 cm	1.54
6016M	20-M/Kg	0.2-M/Kg	12.700 mm	Ratchet	45 cm	2.5
INCH / OUNCE SCREWDRIVER						
6081	1-100	1 oz/in	¼"	Reversible Ratchet	5"	6 oz
INCH / POUND SCREWDRIVER						
6082	1-30	¼ oz/in	¼"	Reversible Ratchet	5"	6 oz

- You can use it in the dark, in blind spots, noisy places, on vibrating machinery, under water, in oil, or with heavy gloves on your hands.
- Turn the handle until its micrometer-type calibrations show torque you want. Attach socket or apply to nut or bolt. You pull right up to the required torque point without hesitation, eyestrain, earstrain or nervous tension. When the right torque is reached, the PROTO wrench releases automatically and signals you with its own mechanical action . . . tells you "when" clearly and unmistakably. After removal of handle pressure the wrench resets automatically to the same torque point.
- You can work a lot longer without getting tired because the PROTO torquer has no heavy accessories, no protruding devices interfering with operation. You don't have to struggle into position to read a dial or listen for a click.
- Tighten, loosen and torque, all with one tool. Ratchet models do the work of both a reversible ratchet wrench and a torque wrench. Saves a lot of time switching tools and sockets.
- The PROTO torquer gives you a longer lifetime of accurate, trouble-free operation because all working parts are enclosed, there are no protruding pointers or glass-faced dials to damage. All-steel construction is rugged, requires no special care.
- The PROTO torquer is one of the most versatile and useful tools in the manufacture and repair of instruments, aircraft parts, missiles, electronic equipment, automatic transmissions, heavy-duty work on diesel engines, cars, trucks, aircraft, power and construction. equipment.

TORQUE WRENCH ADAPTERS



NO.	DESCRIPTION	LENGTH	LBS.
6420	¾", 12-Point Box Opening, Wide Sweep	6 19/32"	.61
6425	¾", 12-Point Box Opening, Close Sweep	5 17/32"	.43
6430	½" Square Male Plug	5½"	.50
6435	11/16", 12-Point Box Opening	7 5/16"	.63

To clear obstructions in torquing head bolts. Many other uses. All are ½" drive.

6420—For Chev., Ford and other engines with ¾" head bolts.
6425—For use on engines having ¾" head bolts with limited clearance.
6430—For Powerglide Chevs. and general uses. Male square permits use of any size ½" dr. socket.
6435—For Ford products, Pontiac, Studebaker and other engines with 11/16" head bolts.

POWER AND IMPACT-TYPE
SOCKET WRENCHES AND ATTACHMENTS

Engineered for Extra Rugged Service on All Types of Power Nut-Running and Impact Nut-Setting Wrenches, and for Heavy-Duty Use on Manual Attachments

PROTOLOY® alloy steels, scientific heat treatment and advanced design provide these sockets with great strength, toughness, snug fit, freedom from slipping, and maximum clearance for speed and ease in handling. All of these features mean a high safety factor, long life and low cost.

They fit most clutch-type power nut runners and electric or pneumatic impact nut setters. They also fit manual socket handles and therefore are ideal for many jobs demanding strength greater than provided in regular thinner-wall sockets.

PROTO power and impact sockets are widely used by all types of manufacturers for assembly and maintenance work, and are noted for their outstanding performance on production lines. They are popular also with mechanics for tractor, truck, bus, construction equipment and car repairing.

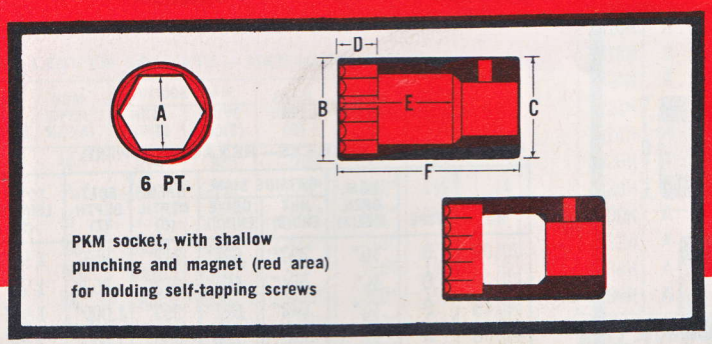
Finish is black oxide and lacquered.

All socket drive end walls are drilled for use on attachments with pellet-type locking device. All Proto power attachments employ the pellet type . . . a positive locking device for greater safety.

¼" SQUARE DRIVE POWER SOCKETS

1/4"

HEX DRIVER EXTENSION



PKM socket, with shallow punching and magnet (red area) for holding self-tapping screws

REGULAR LENGTH TYPE A

REGULAR LENGTH TYPE B

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
6906PK	B	3/16"	.359"	.447"	.125"	.500"	7/8"	.02
6908PK	A	1/4"	.447"	.447"	.125"	.500"	29/32"	.02
6909PK	B	9/32"	.468"	.510"	.125"	.500"	29/32"	.03
6910PK	A	5/16"	.510"	.510"	.125"	.500"	29/32"	.03
6912PK	A	3/8"	.572"	.572"	.156"	.500"	29/32"	.03

REGULAR LENGTH MAGNETIC SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON (6-POINT)

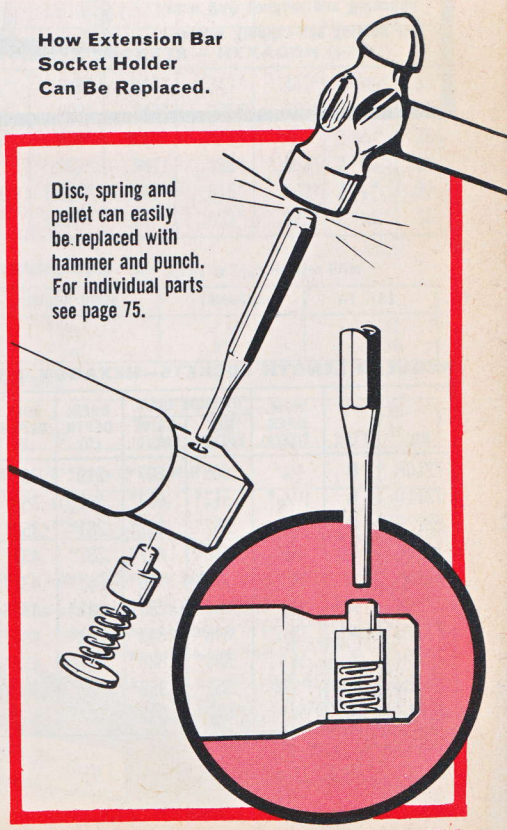
NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
6906PKM	B	3/16"	.359"	.447"	.125"	0	7/8"	.03
6908PKM	A	1/4"	.447"	.447"	.125"	0	29/32"	.03
6909PKM	B	9/32"	.468"	.510"	.125"	0	29/32"	.03
6910PKM	A	5/16"	.510"	.510"	.125"	0	29/32"	.04
6911PKM	A	11/32"	.541"	.541"	.140"	0	29/32"	.04
6912PKM	A	3/8"	.572"	.572"	.156"	0	29/32"	.04

HEX DRIVER-EXTENSION

1/4" Square by 1/4" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7102	3/8"	2"	.03

How Extension Bar Socket Holder Can Be Replaced.



Disc, spring and pellet can easily be replaced with hammer and punch. For individual parts see page 75.

3/8" SQUARE DRIVE POWER SOCKETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

EXTENSION BAR

HEX DRIVER EXTENSION

DEEP LENGTH
TYPE A

DEEP LENGTH
TYPE B

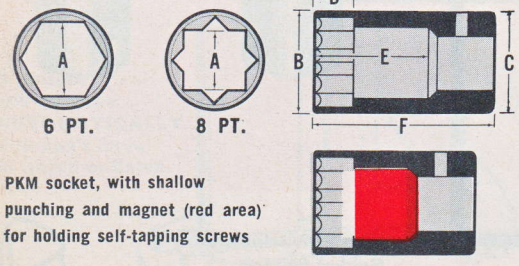
REGULAR LENGTH
TYPE A

REGULAR LENGTH
TYPE B

7273-
7277

7270

DIMENSION CODE



6 PT. 8 PT.

PKM socket, with shallow punching and magnet (red area) for holding self-tapping screws

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

DEEP LENGTH SOCKETS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7010H	B	5/16"	.497"	.697"	.312"	.953"	1 1/2"	.10
7012H	B	3/8"	.564"	.697"	.312"	.953"	1 1/2"	.11
7014H	B	7/16"	.643"	.697"	.359"	1.000"	1 1/2"	.09
7016H	B	1/2"	.723"	.760"	.406"	1.000"	1 1/2"	.09
7018H	A	9/16"	.791"	.791"	.453"	1.000"	1 1/2"	.12
7020H	A	5/8"	.885"	.885"	.500"	1.000"	1 1/2"	.14
7022H	A	11/16"	.947"	.947"	.546"	1.000"	1 1/2"	.20
7024H	A	3/4"	1.041"	1.041"	.594"	1.000"	1 1/2"	.24

BALL-TYPE UNIVERSAL SOCKETS—HEXAGON (6-POINT)

7273		3/8"	.598"	.853"	.312"	.406"	2 3/16"	.24
7274		7/16"	.682"	.853"	.343"	.437"	2 7/32"	.25
7275		1/2"	.746"	.853"	.375"	.500"	2 1/4"	.25
7276		9/16"	.826"	.853"	.422"	.500"	2 9/32"	.26
7277		5/8"	.884"	.853"	.437"	.562"	2 11/32"	.26

NO. 7270 UNIVERSAL JOINT

Ball-type. Length, 2 3/8". Weight, .28 Lb. For replacement parts see page 75.

REGULAR LENGTH SOCKETS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7210H	B	5/16"	.505"	.697"	.219"	.359"	15/16"	.07
7211H	B	11/32"	.517"	.697"	.281"	.359"	15/16"	.07
7212H	B	3/8"	.557"	.697"	.281"	.359"	15/16"	.05
7214H	B	7/16"	.638"	.697"	.281"	.437"	15/16"	.05
7216H	A	1/2"	.760"	.760"	.281"	.437"	15/16"	.06
7218H	A	9/16"	.791"	.791"	.281"	.437"	15/16"	.07
7219H	A	19/32"	.843"	.843"	.281"	.437"	15/16"	.07
7220H	A	5/8"	.885"	.885"	.281"	.437"	15/16"	.10
7222H	A	11/16"	.952"	.952"	.422"	.562"	1"	.16
7224H	A	3/4"	1.042"	1.042"	.422"	.562"	1"	.21

HEX DRIVER-EXTENSIONS 3/8" Square by 7/16" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7111	9/16"	2 3/4"	.14
7113	9/16"	5"	.30

EXTENSION BARS 3/8" Female by 3/8" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7175P	7/16"	3"	.16
7176P	7/16"	6"	.28

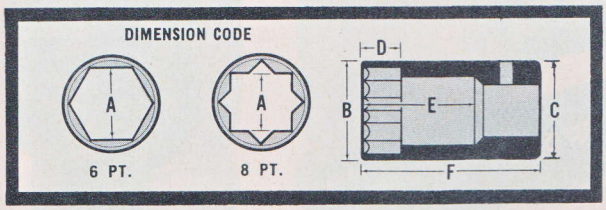
NOTE: For spare parts listing see page 75.

½" SQUARE DRIVE POWER SOCKETS

1/2"

NOTE: For spare parts see page 75

REGULAR LENGTH TYPE A | REGULAR LENGTH TYPE B | REGULAR LENGTH TYPE C | 7474—7479 | 7470 | DEEP LENGTH TYPE A | DEEP LENGTH TYPE B



Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

REGULAR LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7412H	B	3/8"	.615"	.885"	.281"	.562"	1½"	.13
7414H	B	7/16"	.697"	.885"	.328"	.562"	1½"	.14
7416H	B	½"	.778"	.947"	.375"	.562"	1½"	.17
7418H	B	9/16"	.859"	.947"	.422"	.718"	1½"	.17
7419H	B	19/32"	.902"	1.010"	.437"	.750"	1½"	.19
7420H	B	5/8"	.946"	1.010"	.468"	.750"	1½"	.17
7422H	A	11/16"	1.042"	1.042"	.515"	.750"	1½"	.22
7424H	A	¾"	1.135"	1.135"	.562"	.828"	1½"	.26
7426H	A	13/16"	1.197"	1.197"	.609"	.828"	1½"	.38
7428H	C	7/8"	1.291"	1.215"	.625"	.843"	1½"	.31
7430H	C	15/16"	1.385"	1.310"	.687"	.875"	1¾"	.45
7432H	C	1"	1.447"	1.310"	.750	1.000"	1¾"	.48
7434H	C	1 1/16"	1.510'	1.373"	.812"	1.250"	2"	.55
7436H	C	1 1/8"	1.635"	1.435"	.843"	1.250"	2"	.66
7438H	C	1 3/16"	1.697"	1.517"	.875"	1.250"	2"	.71
7440H	C	1¼"	1.770"	1.558"	.937"	1.250"	2"	.79

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS — HEXAGON (6-POINT)

7416PK	B	½"	.775"	.947"	.281"	.562"	1½"	.16

REG. LENGTH SOCKETS — DOUBLE SQUARE (8-PT.)

7412S	B	3/8"	.734"	.885"	.281"	.562"	1½"	.16
7414S	B	7/16"	.828"	.947"	.328"	.562"	1½"	.17
7416S	A	½"	.947"	.947"	.375"	.750"	1½"	.21
7418S	A	9/16"	1.010"	1.010"	.422"	.750"	1½"	.26
7420S	A	5/8"	1.135"	1.135"	.468"	.781"	1½"	.29
7422S	A	11/16"	1.207"	1.207"	.515"	.812"	1½"	.37
7424S	A	¾"	1.322"	1.322"	.531"	.843"	1½"	.44
7426S	A	13/16"	1.395"	1.395"	.609"	.843"	1½"	.48
7428S	A	7/8"	1.518"	1.518"	.656"	.906"	1½"	.38
7430S	A	15/16"	1.635"	1.635"	.703"	1.031"	1¾"	.58
7432S	A	1"	1.707"	1.707"	.750"	1.031"	1¾"	.60

NO. 7470 UNIVERSAL JOINT Ball-type. Length, 2¾". Wt., .38 Lb.

NOTE: For Power Stud Remover and Setter, See Page 35.

DEEP LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7312H	B	3/8"	.619"	.885"	.281"	2.562"	3¼"	.33
7314H	B	7/16"	.697"	.885"	.328"	2.562"	3¼"	.33
7316H	B	½"	.781"	.947"	.375"	2.562"	3¼"	.31
7318H	B	9/16"	.859"	.947"	.437"	2.562"	3¼"	.37
7320H	B	5/8"	.946"	1.010"	.468"	2.562"	3¼"	.36
7322H	A	11/16"	1.042"	1.042"	.515"	2.562"	3¼"	.41
7324H	A	¾"	1.135"	1.135"	.562"	2.562"	3¼"	.59
7326H	A	13/16"	1.197"	1.197"	.609"	2.562"	3¼"	.56
7328H	A	7/8"	1.291"	1.291"	.672"	2.562"	3½"	.62
7330H	A	15/16"	1.385"	1.385"	.703"	2.750"	3½"	.86
7332H	A	1"	1.447"	1.447"	.750"	2.750"	3½"	.90
7334H	A	1 1/16"	1.510"	1.510"	.781"	2.750"	3½"	1.00
7336H	A	1 1/8"	1.572"	1.572"	.843"	2.750"	3½"	1.02

BALL-TYPE UNIVERSAL SOCKETS — HEXAGON (6-PT.)

7474	..	7/16"	.689"	.947"	.343"	.437"	2 17/32"	.35
7475	..	½"	.800"	.947"	.375"	.500"	2 17/32"	.35
7476	..	9/16"	.874"	.947"	.421"	.562"	2 9/16"	.36
7477	..	5/8"	.957"	.947"	.468"	.562"	2 19/32"	.37
7478	..	11/16"	1.022"	.947"	.515"	.562"	2 5/8"	.37
7479	..	¾"	1.035"	.947"	.562"	.625"	2 41/64"	.36

HEX DRIVER-EXTENSIONS ½" Square by 7/16" Hexagon Drive

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7121	21/32"	2 3/4"	.17
7123	21/32"	5"	.38

½" Square by 5/8" Hexagon Drive

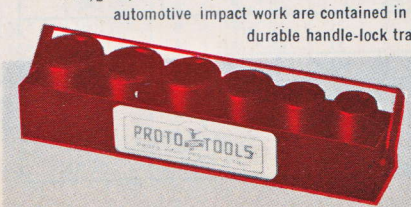
7131	3/4"	2 3/4"	.25
7133	3/4"	5"	.52

EXTENSION BARS 1/2" Female by 1/2" Male

7180P	21/32"	2"	.28
7181P	19/32"	5"	.47

NO. 7400D SET 1/2 Square Drive Power Sockets

Six ½" square drive power sockets that do 90% of automotive impact work are contained in a durable handle-lock tray.



NO.	SIZE
7416H	½"
7418H	9/16"
7420H	5/8"
7422H	11/16"
7424H	3/4"
7426H	13/16"
9974	TRAY

Weight 1.[illegible] Lbs.

5/8" SQUARE DRIVE POWER SOCKETS

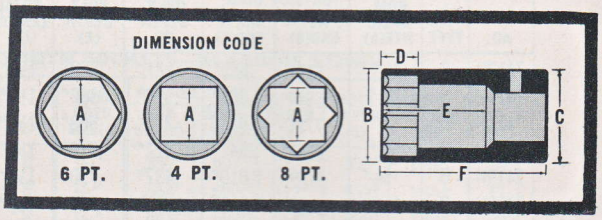
PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

NO. 7670 UNIVERSAL JOINT —BALL TYPE

NO.	LENGTH	WEIGHT
7670	3"	.60 Lb.

Parts for the 7670 Universal Joint are easily replaced. No special tools required.

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



DEEP LENGTH SOCKETS HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7518H	B	9/16"	.885"	1.135"	.437"	2.250"	3 1/4"	.56
7520H	B	5/8"	1.010"	1.197"	.468"	2.250"	3 1/4"	.69
7522H	B	11/16"	1.135"	1.260"	.515"	2.250"	3 1/4"	.75
7524H	B	3/4"	1.197"	1.260"	.562"	2.250"	3 1/4"	.76
7526H	A	13/16"	1.260"	1.260"	.609"	2.250"	3 1/4"	.77
7528H	A	7/8"	1.292"	1.292"	.656"	2.375"	3 1/4"	.78
7530H	A	15/16"	1.385"	1.385"	.703"	2.500"	3 1/2"	.94
7532H	A	1"	1.447"	1.447"	.750"	2.625"	3 1/2"	1.06
7534H	A	1 1/16"	1.522"	1.522"	.796"	2.718"	3 1/2"	1.06
7536H	A	1 1/8"	1.572"	1.572"	.843"	2.687"	3 1/2"	1.26
7538H	A	1 3/16"	1.697"	1.697"	.875"	2.656"	3 1/2"	1.36
7540H	A	1 1/4"	1.785"	1.785"	.937"	2.656"	3 1/2"	1.50
7542H	A	1 5/16"	1.885"	1.885"	.937"	2.656"	3 1/2"	1.66
7544H	A	1 3/8"	1.947"	1.947"	1.031"	2.625"	3 1/2"	1.77
7546H	A	1 7/16"	2.010"	2.010"	1.078"	2.625"	3 1/2"	1.80
‡7548H	A	1 1/2"	2.087"	2.087"	1.125"	2.593"	3 1/2"	1.88

REGULAR LENGTH SOCKET — SQUARE (4-POINT)

†7626SS	A	13/16"	1.510"	1.510"	.531"	1.000"	2"	.64

EXTENSION BAR 5/8" Female by 5/8" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
7185P	3/4"	7 1/2"	1.08

HEX DRIVER EXTENSIONS 5/8" Square by 5/8" Hex. Drive

7151	13/16"	3"	.32

POWER ADAPTERS

NO.	FEMALE	MALE	LENGTH	WT.
7654	1/2"	5/8"	1 3/4"	.26 Lb.
7655	5/8"	1/2"	1 7/8"	.37 Lb.
7656	5/8"	3/4"	2"	.42 Lb.
7657	3/4"	5/8"	1 15/16"	.52 Lb.

REGULAR LENGTH SOCKETS — HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7618H	B	9/16"	.870"	1.072"	.437"	.500"	1 33/64"	.18
7619H	B	19/32"	.910"	1.103"	.437"	.500"	1 33/64"	.24
7620H	B	5/8"	.960"	1.135"	.469"	.500"	1 33/64"	.22
7622H	B	11/16"	1.059"	1.197"	.515"	.750"	1 33/64"	.26
7624H	B	3/4"	1.110"	1.260"	.562"	.750"	1 3/4"	.28
7626H	B	13/16"	1.247"	1.291"	.609"	.750"	1 3/4"	.32
7628H	A	7/8"	1.291"	1.291"	.656"	1.032"	1 3/4"	.30
7629H	A	29/32"	1.322"	1.322"	.687"	1.032"	1 3/4"	.41
7630H	A	15/16"	1.385"	1.385"	.703"	1.250"	2"	.50
7632H	A	1"	1.447"	1.447"	.750"	1.250"	2"	.57
7634H	A	1 1/16"	1.522"	1.522"	.796"	1.250"	2"	.64
‡7636H	A	1 1/8"	1.635"	1.635"	.844"	1.250"	2"	.73
7638H	A	1 3/16"	1.697"	1.697"	.890	1.250"	2"	.79
7640H	A	1 1/4"	1.785"	1.785"	.937"	1.250"	2"	.89
7642H	A	1 5/16"	1.885"	1.885"	.937"	1.250"	2"	.93
7644H	A	1 3/8"	1.947"	1.947"	1.032"	1.437"	2 1/4"	1.20
7646H	A	1 7/16"	2.010"	2.010"	1.062"	1.437"	2 1/4"	1.20
‡7648H	A	1 1/2"	2.087"	2.087"	1.125"	1.531"	2 3/8"	1.30

REGULAR LENGTH SOCKETS — DOUBLE SQUARE (8-POINT)

7618S	B	9/16"	1.072"	1.197"	.375"	.687"	1 1/2"	.31
7620S	B	5/8"	1.197"	1.260"	.406"	.718"	1 1/2"	.31
7622S	A	11/16"	1.260"	1.260"	.437"	.750"	1 1/2"	.40
7624S	A	3/4"	1.385"	1.385"	.468"	.781"	1 1/2"	.44
7626S	A	13/16"	1.510"	1.510"	.531"	.906"	1 5/8"	.50
7628S	A	7/8"	1.510"	1.510"	.593"	.906"	1 5/8"	.53
7630S	A	15/16"	1.635"	1.635"	.656"	1.000"	1 3/4"	.59
7632S	A	1"	1.760"	1.760"	.750"	1.032"	1 3/4"	.75
7634S	A	1 1/16"	1.822"	1.822"	.750"	1.187"	2"	1.00
7636S	A	1 1/8"	1.947"	1.947"	.750"	1.187"	2 "	1.06

†Designed Especially for Budd Wheels. ‡Can Be Used for Budd Wheels.

NOTE: For spare parts see page 75

¾" SQUARE DRIVE IMPACT SOCKETS

EXTRA HEAVY DUTY WITH POSITIVE LOCKING PIN

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

3/4"

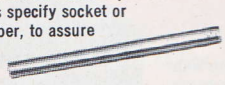
REGULAR LENGTH TYPE A

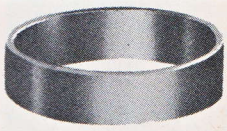
REGULAR LENGTH TYPE B

07656

07655

Impact sockets, adapters, and extension bar come with a flat band and retainer pin. For extra bands or pins specify socket or extension bar number, to assure proper size.

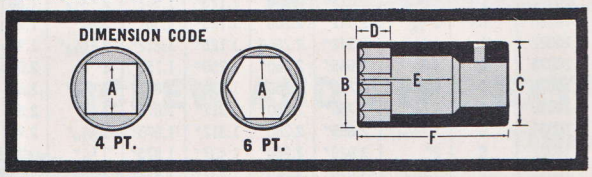




EXTENSION BAR

DEEP LENGTH TYPE A

DEEP LENGTH TYPE B



REGULAR LENGTH SOCKET —HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
07509	B	9/16"	1.010"	1.635"	.562"	.750"	1 7/8"	.67
07510	B	5/8"	1.103"	1.635"	.562"	.750"	1 7/8"	.67
07511	B	11/16"	1.166"	1.635"	.562"	.750"	1 7/8"	.66
07512	B	3/4"	1.260"	1.635"	.625"	1.000"	1 7/8"	.68
07513	B	13/16"	1.385"	1.635"	.625"	1.000"	1 7/8"	.62
07514	B	7/8"	1.510"	1.635"	.687"	1.000"	2"	.70
07515	B	15/16"	1.572"	1.635"	.687"	1.000"	2"	.86
07516	B	1"	1.635"	1.760"	.687"	1.062"	2 1/16"	1.00
07517	B	1 1/16"	1.697"	1.760"	.750"	1.062"	2 1/16"	1.14
07518	A	1 1/8"	1.760"	1.760"	.750"	1.125"	2 3/16"	1.28
07519	A	1 3/16"	1.885"	1.885"	.750"	1.125"	2 3/16"	1.32
07520	A	1 1/4"	2.010"	2.010"	.750"	1.125"	2 3/16"	1.36
07521	A	1 5/16"	2.072"	2.072"	.750"	1.125"	2 3/16"	1.32
07522	A	1 3/8"	2.135"	2.135"	.812"	1.125"	2 1/4"	1.62
07523	A	1 7/16"	2.260"	2.260"	.812"	1.156"	2 5/16"	1.56
‡07524	A	1 1/2"	2.322"	2.322"	.875"	1.156"	2 5/16"	1.62

REGULAR LENGTH SOCKET — SQUARE (4-POINT)

†07513SS	A	13/16"	1.697"	1.697"	.537"	1.437"	2 7/16"	.82

DEEP LENGTH SOCKETS —HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
07509L	B	9/16"	1.010"	1.635"	.562"	1.625"	3"	1.19
07510L	B	5/8"	1.103"	1.635"	.562"	1.625"	3"	1.20
07511L	B	11/16"	1.166"	1.635"	.562"	1.625"	3"	1.21
07512L	B	3/4"	1.260"	1.635"	.625"	1.625"	3"	1.22
07513L	B	13/16"	1.385"	1.635"	.625"	1.625"	3"	1.23
07514L	B	7/8"	1.510"	1.635"	.687"	1.625"	3"	1.24
07515L	B	15/16"	1.572"	1.635"	.687"	1.625"	3"	1.25
07516L	B	1"	1.635"	1.760"	.687"	2.000"	3"	1.26
07517L	B	1 1/16"	1.697"	1.760"	.750"	2.000"	3"	1.32
07518L	A	1 1/8"	1.760"	1.760"	.750"	2.000"	3"	1.41
07519L	A	1 3/16"	1.885"	1.885"	.750"	2.187"	3 1/4"	1.60
07520L	A	1 1/4"	2.010"	2.010"	.750"	2.187"	3 1/4"	1.81
07521L	A	1 5/16"	2.072"	2.072"	.750"	2.187"	3 1/4"	1.85
07523L	A	1 7/16"	2.260"	2.260"	.812"	2.375"	3 1/2"	2.5
†07524L	A	1 1/2"	2.322"	2.322"	.875"	2.375"	3 1/2"	2.6
‡7748H	A	1 1/2"	2.135"	2.135"	1.125"	2.500"	3 1/2"	1.92

DEEP LENGTH SOCKET — SQUARE (4-POINT)

†07513SL	A	13/16"	1.697"	1.697"	.537"	3.000"	4"	1.98

EXTENSION BAR 3/4" Female by 3/4" Male

NO.	SHANK DIAM.	LENGTH	WT., LBS.
07567	1"	7"	1.92

IMPACT POWER ADAPTERS

No. 07655 ¾" Female x 1" male, length 2 ¼". Weight, .72 Lb.
No. 07656 1" Female x ¾" male, length 2 ¾". Weight, 1.30 Lbs.

†Designed for Budd Wheels. ‡Suitable for Budd Wheels.

BUDD WHEEL POWER-IMPACT SOCKETS

Specially designed PROTO sockets with 13/16" and 15/16" square and 1 ½" and 1 ¾" hex openings speed the job of changing Budd wheels. They are available in ⅝" square drive power, ¾" power, ¾" impact and 1" impact types. Socket 07513SL has a stop in the square opening base at the correct depth to prevent damage to inner nut threads. This socket, and 7748HL, 07524L and 10024L, are extra deep to clear most hubs without using extensions.

NO.	TYPE	NOMINAL OPENING	DRIVE SIZE	TYPE SOCKET	TOTAL LENGTH	WT., LBS.
7626SS	A	13/16" Sq.	5/8"	Power	2"	.64
07513SL	A	13/16" Sq.	3/4"	Impact	4"	1.98
07513SS	A	13/16" Sq.	3/4"	Impact	2 7/16"	.82
10013SS	B	13/16" Sq.	1"	Impact	2 5/16"	1.16
10015SL	A	15/16" Sq.	1"	Impact	2 1/4"	1.60
10028XL	C *	1 3/4" Hex.	1"	Impact	3 5/8"	2.94
7748HL	A	1 1/2" Hex.	3/4"	Power	5"	3.5
07524L	A	1 1/2" Hex.	3/4"	Impact	3 1/2"	2.6
10024L	A	1 1/2" Hex.	1"	Impact	3 1/2"	2.4

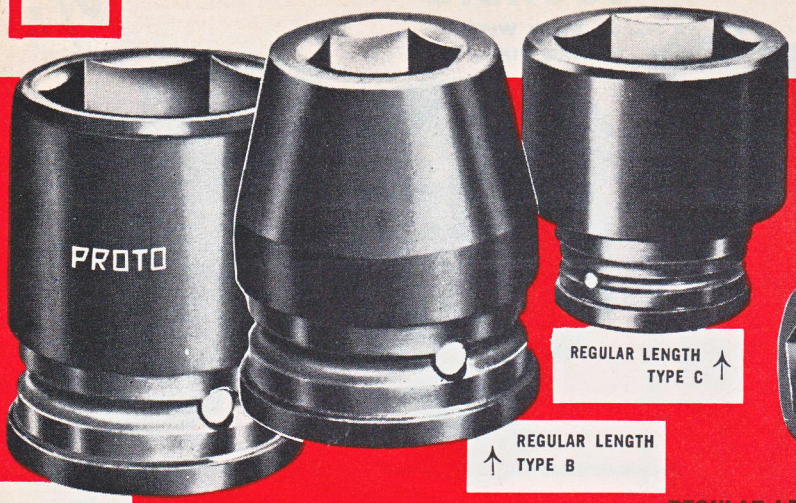
NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see chart page 76.

* For illustration of type C refer to page 56.

NOTE: For spare parts listing see page 75.

1" SQUARE DRIVE IMPACT SOCKETS

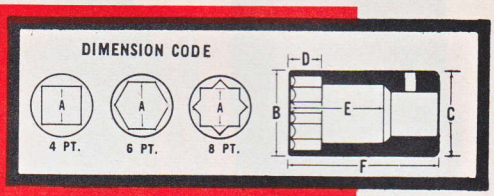
PROTO TOOLS
PROfessional QUALITY TOols

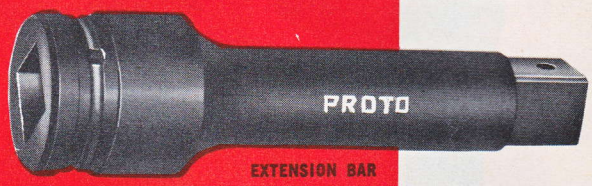


REGULAR LENGTH TYPE C

REGULAR LENGTH TYPE B

REGULAR LENGTH TYPE A





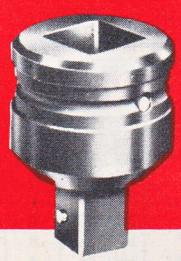
EXTENSION BAR

Impact sockets and extension bar come with a flat band and retainer pin. For extra bands or pins specify socket or extension bar number, to assure proper size.

DEEP LENGTH TYPE A

DEEP LENGTH TYPE B

DEEP LENGTH TYPE C



IMPACT ADAPTERS
No. 07655 3/4" female x 1" —male 2 1/4" length. Wt. .72 Lbs.
No. 07656 1" female x 3/4" —male 2 3/4" length. Wt. 1.30 Lbs.

REGULAR LENGTH SOCKETS—HEXAGON (6-POINT)

NO.	TYPE	NOM. OPEN. SIZE(A)	OUTSIDE DIAM. NUT END(B)	OUTSIDE DIAM. DRIVE END(C)	OPEN. DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
10012	B	3/4"	1.437"	2.135"	.593"	1.000"	2 5/16"	.96
10014	B	7/8"	1.531"	2.135"	.656"	1.000"	2 5/16"	1.04
10015	B	15/16"	1.593"	2.135"	.750"	1.125"	2 5/16"	1.02
10016	B	1"	1.687"	2.135"	.750"	1.250"	2 3/8"	1.06
10017	B	1 1/16"	1.760"	2.135"	.875"	1.250"	2 3/8"	1.28
‡ 10018	B	1 1/8"	1.820"	2.135"	.875"	1.250"	2 3/8"	1.30
10019	B	1 3/16"	1.885"	2.135"	.875"	1.250"	2 3/8"	1.28
10020	B	1 1/4"	2.000"	2.135"	.937"	1.375"	2 1/2"	1.23
10021	B	1 5/16"	2.063"	2.135"	1.000"	1.500"	2 9/16"	1.30
10022	A	1 3/8"	2.135"	2.135"	1.031"	1.531"	2 5/8"	1.46
10023	A	1 7/16"	2.260"	2.260"	1.062"	1.531"	2 11/16"	1.46
‡ 10024	C	1 1/2"	2.322"	2.260"	1.125"	1.531"	2 3/4"	1.46
10025	C	1 9/16"	2.375"	2.250"	1.125"	1.562"	2 13/16"	1.56
10026	C	1 5/8"	2.447"	2.260"	1.125"	1.562"	2 7/8"	1.78
10027	C	1 11/16"	2.572"	2.260"	1.125"	1.812"	2 15/16"	1.96
10028	C	1 3/4"	2.635"	2.260"	1.250"	1.750"	3"	2.0
10029	C	1 13/16"	2.760"	2.260"	1.312"	1.812"	3 1/16"	2.5
10030	C	1 7/8"	2.760"	2.260"	1.312"	1.875"	3 1/8"	2.3
10031	C	1 15/16"	2.895"	2.260"	1.312"	1.875"	3 3/16"	2.7
10032	C	2"	3.020"	2.260"	1.437"	1.875"	3 1/4"	3.2
10033	C	2 1/16"	3.020"	2.260"	1.437"	1.875"	3 5/16"	3.2
10034	C	2 1/8"	3.145"	2.390"	1.500"	1.875"	3 3/8"	3.4
10035	C	2 3/16"	3.270"	2.390"	1.562"	1.921"	3 7/16"	4.0
10036	C	2 1/4"	3.270"	2.390"	1.562"	2.000"	3 1/2"	4.1
10037	C	2 5/16"	3.395"	2.390"	1.562"	2.000"	3 9/16"	4.2
10038	C	2 3/8"	3.520"	2.390"	1.562"	2.000"	3 5/8"	4.2
10039	C	2 7/16"	3.510"	2.390"	1.562"	2.000"	3 5/8"	4.5
10040	C	2 1/2"	3.635"	2.390"	1.562"	2.375"	4"	4.9
10041	C	2 9/16"	3.760"	2.390"	1.562"	2.375"	4"	5.4
10042	C	2 5/8"	3.760"	2.390"	1.562"	2.375"	4"	5.3
10043	C	2 11/16"	3.885"	2.390"	1.562"	2.625"	4 1/4"	6.0
10044	C	2 3/4"	3.885"	2.390"	1.562"	2.625"	4 1/4"	5.8
10045	C	2 13/16"	4.010"	2.390"	1.625"	2.625"	4 3/8"	6.9
10046	C	2 7/8"	4.010"	2.390"	1.625"	2.625"	4 3/8"	6.5
10047	C	2 15/16"	4.135"	2.390"	1.687"	2.625"	4 5/8"	7.7
10048	C	3"	4.260"	2.390"	1.750"	2.625"	4 5/8"	7.9
10050	C	3 1/8"	4.385"	2.390"	1.750"	2.625"	4 3/4"	8.3

REGULAR AND LONG SOCKETS — SQUARE (4-POINT)

† 10013SS	B	13/16"	1.947"	2.135"	.609"	.875"	2 5/16"	1.16
† 10015SL	B	15/16"	2.063"	2.125"	.593"	1.125"	2 1/4"	1.60

REGULAR LENGTH SOCKETS — DOUBLE SQUARE (8-POINT)

10018S	A	1 1/8"	2.260"	2.260"	.937"	1.250"	2 1/2"	1.56
10020S	A	1 1/4"	2.385"	2.385"	.937"	1.312"	2 9/16"	1.80
10021S	A	1 5/16"	2.510"	2.510"	1.000"	1.531"	2 5/8"	2.2
10023S	A	1 7/16"	2.697"	2.697"	1.062"	1.625"	2 3/4"	2.3

DEEP LENGTH SOCKETS — HEXAGON (6-POINT)

10015L	B	15/16"	1.593"	2.135"	.750"	2.000"	3 1/2"	2.1
10017L	B	1 1/16"	1.760"	2.135"	.875"	2.250"	3 1/2"	2.3
10020L	B	1 1/4"	2.000"	2.135"	.937"	2.250"	3 1/2"	2.2
† 10024L	C	1 1/2"	2.322"	2.260"	1.125"	2.250"	3 1/2"	2.4
† 10028XL	C	1 3/4"	2.625"	2.250"	1.250"	2.500"	3 5/8"	2.94

† Designed for Budd Wheels. ‡ Suitable for Budd Wheels.

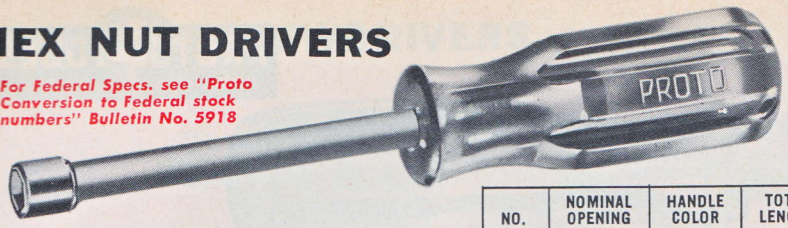
EXTENSION BAR 1" FEMALE by 1" MALE

NO.	SHANK DIAM.	LENGTH	WT., LBS.
10607	1 11/32"	7 1/2"	3.7

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

HEX NUT DRIVERS

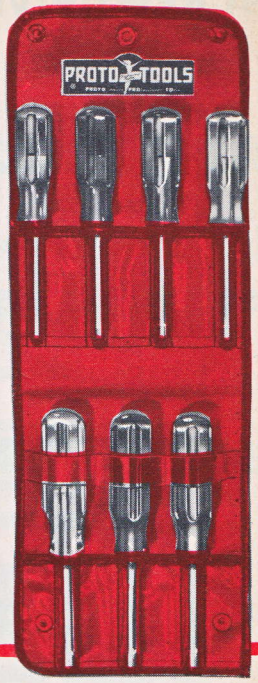
For Federal Specs. see "Proto Conversion to Federal stock numbers" Bulletin No. 5918



A must for electronics, instruments, automotive, radio and ignition work. Fluted handles of fire-resistant plastic are size coded by colors. Chrome plated hollow steel shafts clear long bolts, reduce weight. Special *heat-treated* shafts give high wear resistance for use on hardened screws or bolts . . . long life. *Precision formed drive openings* fit snugly . . . hold tight for long usage.

NO.	NOMINAL OPENING	HANDLE COLOR	TOTAL LENGTH	WT., LBS.
9206	3/16"	Black	6 1/8"	.16
9207	7/32"	Brown	6 1/8"	.16
9208	1/4"	Red	6 1/8"	.16
9209	9/32"	Orange	6 1/8"	.16
9210	5/16"	Amber	6 7/8"	.22
9211	11/32"	Green	6 7/8"	.22
9212	3/8"	Blue	6 7/8"	.22
9214	7/16"	Brown	7 3/16"	.30
9216	1/2"	Red	7 3/16"	.30
9218	9/16"	Orange	7 3/16"	.33
9220	5/8"	Amber	7 3/16"	.33

SET NO. 9200C



NO. 9200C SET
Includes 7 drivers—Nos. 9206 to 9212, in heavy-duty kit 2419. Wt. 1.44 Lbs.

NO. 9900D CAR OR HOUSEHOLD GIFT SET

Four useful tools in handy roll-up kit for glove compartment or kitchen drawer.

CONTENTS OF SET

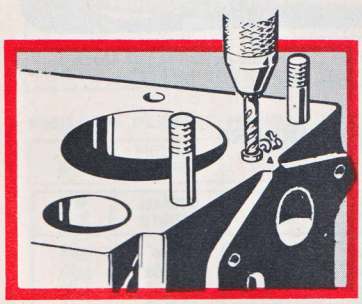
NO.	DESCRIPTION
276	6½" Slip Jt. Plier
706	6" Adj. Wrench
9604	Screwdriver, Plastic Hdl., ¼" Bit
9684	Screwdriver, Phillips No. 2 Bit
2408	Kit 7 15/16" x 9¼"

Weight of Set, 1.24 lbs.

SCREW AND PIPE EXTRACTORS

Fedl. Specs.: GGG-E-936, Type I, Class 2

These extractors are the fastest type obtainable for removing broken screws, studs, bolts, pipe, fittings, etc. They are vastly superior to other designs for several reasons: (1) Only three quick steps are required. (2) Even if hole is drilled clear through, extractor will not chew up object as do other types. (3) Sharp edges bite positively. (4) Gradual taper of flutes prevents wedging and binding. (5) Objects with right or left threads may be removed. (6) Special alloy steel provides long life.

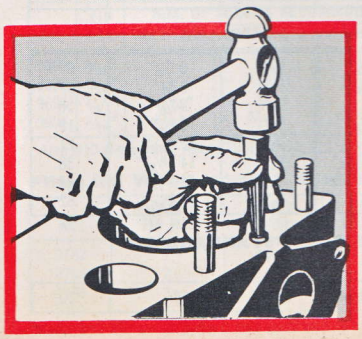


NO.	SIZE OF SMALL END	SIZE OF SHANK	OVER-ALL LENGTH	U.S.S. SCREW, STUD OR BOLT SIZE	DRILL SIZE	MINIMUM DEPTH OF HOLE	PIPE SIZE	WT., LBS.
9521	1/8"	3/16"	2 5/8"	1/4, 5/16	1/8"	3/8"	...	.01
9522	11/64"	3/16"	2 5/8"	3/8	3/16"	1/2"	...	.02
†9523	13/64"	1/4"	2 7/8"	7/16"	15/64"	1/2"	1/8"	.04
9524	19/64"	5/16"	3"	1/2, 9/16"	5/16"	1/2"	1/4"	.06
9525	11/32"	3/8"	3 1/4"	5/8	3/8"	5/8"	3/8"	.10
9525B	27/64"	7/16"	3 7/8"	3/4	15/32"	11/16"	...	.17
9526	1/2"	1/2"	4 1/2"	7/8	9/16"	11/16"	1/2"	.23
9527	19/32"	5/8"	4 7/8"	1, 1 1/8	21/32"	3/4"	1/2"	.40
9528	23/32"	3/4"	5 3/8"	1 1/4, 1 3/8	13/16"	3/4"	3/4"	.65
9529	31/32"	1"	5 1/2"	1 1/2	1 1/16"	3/4"	1"	1.12

†For Broken Alemite Fittings.

HOW TO USE

1. Drill Hole.
2. Drive in Extractor and Turn Out Broken Object.



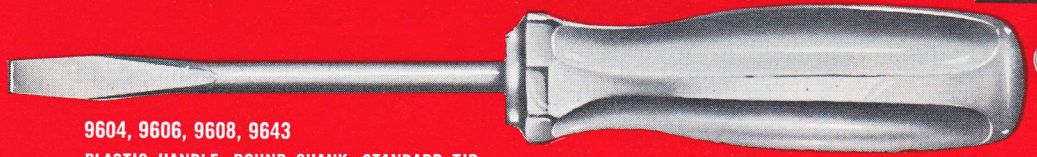
NO. 9500 A SCREW EXTRACTOR SET

Includes the five most popular sizes of extractors—Nos. 9521, 9522, 9523, 9524 and 9525—and a handy, vinyl plastic kit for making all of the extractors quickly accessible. Wt., .26 Lb.

SCREWDRIVERS

*Fedl. Specs.: GGG-S-121d. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PROTO TOOLS
PROfessional QUALITY TOols



9604, 9606, 9608, 9643
PLASTIC HANDLE, ROUND SHANK, STANDARD TIP

9622-9642
PLASTIC HANDLE, ROUND SHANK, CABINET TIP

9800 SERIES
PLASTIC HANDLE, SQUARE SHANK, STANDARD TIP

9701-9743 WOOD HANDLE, SQUARE SHANK, STANDARD TIP
(9722-9733 Have No Steel Cap)

Steel shaft extends entire length of handle.

9752
WOOD HANDLE, SQUARE SHANK, STANDARD TIP

Fine alloy steel blades are heat treated entire length.

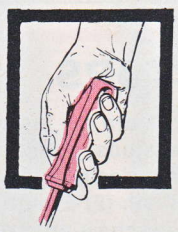
Big comfortable handles give you extra gripping power, less hand slipping, less fatigue.

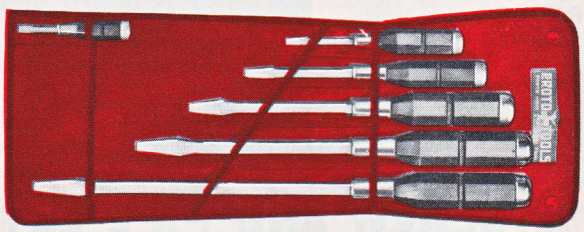
Plastic handles are hand-fitted, big diameter, with large end bearing surface for great palm pressure.

Deep flutes prevent screwdriver rolling.

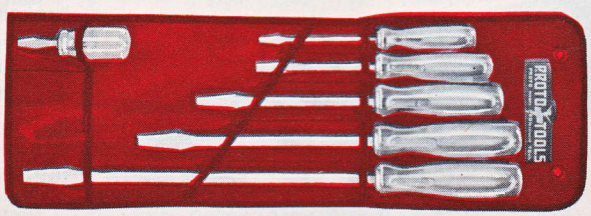
Plastic is tough, smooth, good insulator,

Long-time favorite sure-grip, octagon shape wood handles are seasoned hardwood.





SET 9700A Standard Screwdriver Set—Wood Handle, Square Shank
Contents: 9701, 9702, 9704, 9706, 9708, 9712, Kit 2424. Wt. 3.04 lbs.



SET 9800A Standard Screwdriver Set—Plastic Handle, Square Shank
Contents: 9832, 9804, 9806, 9808, 9812, 9652, Kit 2425. Wt. 2.27 lbs.

PLASTIC-HANDLE SCREWDRIVERS

ROUND SHANK—STANDARD TIP

NO.	SHANK SIZE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
* 9604	1/4"	4"	5/16"	8"	.17
* 9606	5/16"	6"	3/8"	10 3/8"	.30
9643	5/16"	10"	3/8"	14 3/8"	.39
* 9608	3/8"	8"	7/16"	13"	.47

ROUND SHANK—CABINET TIP

9622	1/8"	2 1/2"	1/8"	5 1/4"	.04
* 9623	1/8"	3"	1/8"	5 3/4"	.05
9624	1/8"	4"	1/8"	6 3/4"	.06
* 9625	1/8"	5"	1/8"	7 3/4"	.05
9626	1/8"	6"	1/8"	8 3/4"	.06
* 9627	1/8"	8"	1/8"	10 3/4"	.06
* 9631	3/16"	3"	3/16"	6 3/8"	.10
* 9632	3/16"	4"	3/16"	7 3/8"	.10
* 9633	3/16"	5"	3/16"	8 3/8"	.13
* 9634	3/16"	6"	3/16"	9 3/8"	.14
* 9635	3/16"	8"	3/16"	11 3/8"	.13
* 9636	1/4"	10"	1/4"	14"	.24
9642	1/4"	12"	1/4"	16"	.26

SQUARE SHANK—STANDARD TIP

9822	1/8"	2 1/2"	1/8"	5 1/4"	.04
9801	3/16"	1 1/2"	1/4"	4 1/4"	.06
9832	3/16"	4"	1/4"	7 3/8"	.11
9833	3/16"	7 1/2"	1/4"	10 7/8"	.15
9803	1/4"	3"	5/16"	6 3/8"	.13
* 9804	1/4"	4"	5/16"	8"	.19
9842	1/4"	9"	5/16"	13"	.28
9805	5/16"	5"	3/8"	9 3/8"	.31
* 9806	5/16"	6"	3/8"	10 3/8"	.36
9843	5/16"	10"	3/8"	14 3/8"	.45
* 9808	3/8"	8"	7/16"	13"	.55
* 9810	3/8"	10"	7/16"	15"	.62
* 9812	3/8"	12"	7/16"	17"	.69
9818	1/2"	18"	5/8"	27"	2.0

WOOD-HANDLE SCREWDRIVERS

SQUARE SHANK—STANDARD TIP

NO.	SHANK SIZE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
† 9701	3/16"	1 1/2"	1/4"	4 5/16"	.09
† 9702	3/16"	2 1/2"	1/4"	6 21/32"	.15
* † 9704	1/4"	4 1/16"	5/16"	9 3/32"	.29
* † 9706	5/16"	6"	3/8"	12 3/16"	.51
* † 9708	3/8"	8"	7/16"	14 13/16"	.78
* † 9710	3/8"	10"	7/16"	16 13/16"	.87
† 9712	3/8"	12"	7/16"	18 13/16"	.97
† 9714	7/16"	13 7/8"	1/2"	22 11/16"	1.55

LONG TYPE—SQUARE SHANK—STANDARD TIP

9722	1/8"	2 1/2"	1/8"	5 3/4"	.06
9724	1/8"	4 1/2"	1/8"	7 3/4"	.07
9732	3/16"	4"	1/4"	8 7/8"	.16
9733	3/16"	7 1/2"	1/4"	12 3/8"	.19
† 9741	3/16"	9"	1/4"	13 5/32"	.21
† 9742	1/4"	9 17/32"	5/16"	14 19/32"	.38
† 9744	1/4"	24"	5/16"	29 1/16"	.64
† 9743	5/16"	10"	3/8"	16 3/16"	.62

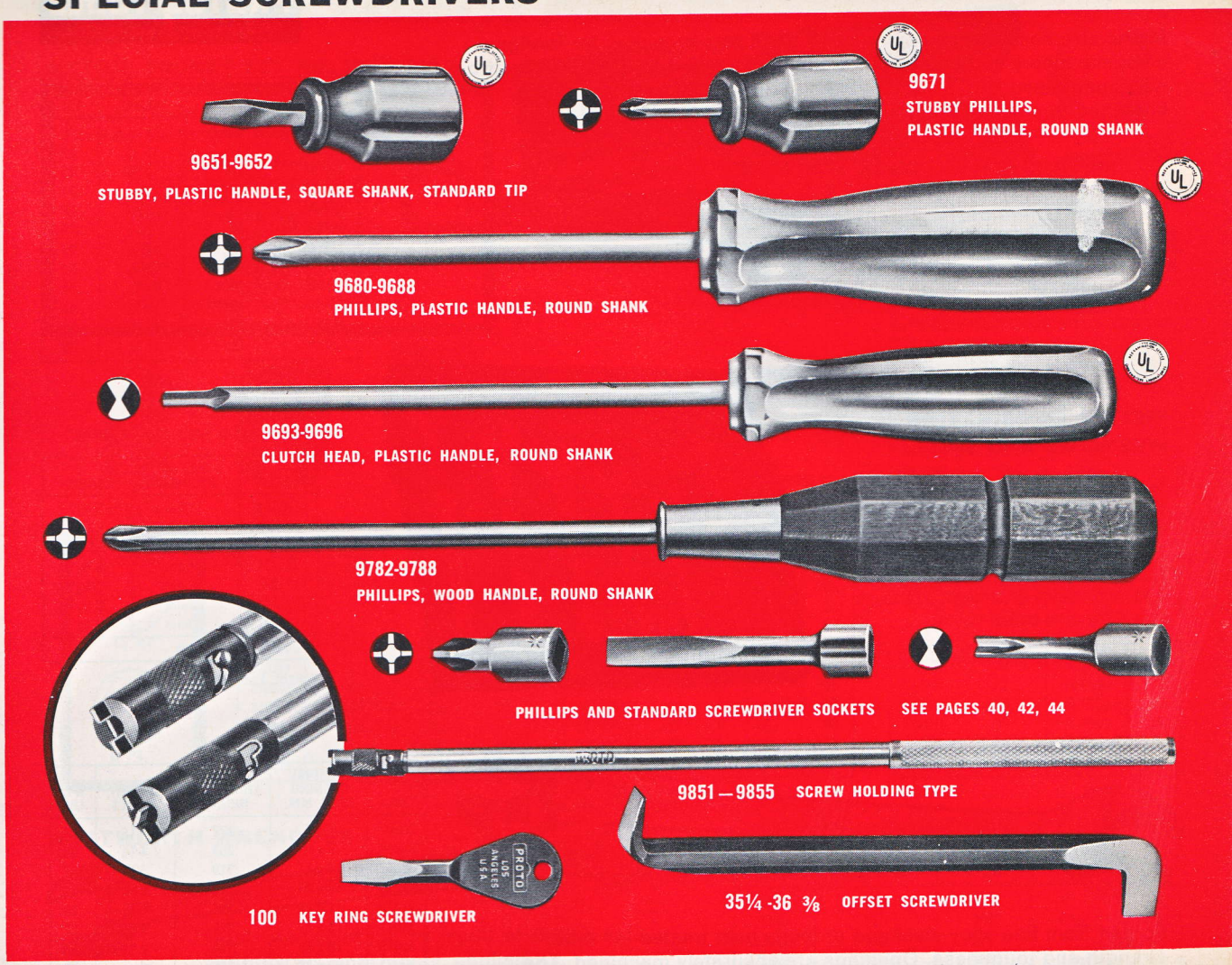
SHORT TYPE—SQUARE SHANK—STANDARD TIP

Fine for tappet work.

† 9752	5/16"	1 11/16"	11/32"	6"	.30

† Has steel cap riveted to handle and blade.

SPECIAL SCREWDRIVERS



Fedl. Specs.: ✱*GGG-S-121d. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.*

STUBBY PLASTIC-HANDLE SCREWDRIVERS

NO.	SHANK SIZE AND SHAPE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
•✱9651	3/16" Square	1"	7/32"	2 7/8"	.07
•✱9652	1/4" Square	1 1/2"	9/32"	3 7/8"	.12

PHILLIPS PLASTIC-HANDLE SCREWDRIVERS

NO.	PHILLIPS TIP NO.	SHANK DIAM.	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
9680	0	1/8"	2 1/2"	5 1/4"	.06
✱9682	1	3/16"	3"	6 3/8"	.09
✱9684	2	1/4"	4 1/4"	8 1/4"	.17
✱9686	3	5/16"	6"	10 3/8"	.30
✱9688	4	3/8"	8"	13"	.48
• 9671	2	1/4"	9/16"	2 7/16"	.07

• Stubby Type—For Restricted Clearance Work.

CLUTCH HEAD (FIG. 8 OR BUTTERFLY) SCREWDRIVERS

Bits are Type G design, preferred in service work.

NO.	TIP SIZE	NOS. OF SCREWS ACCOMMODATED				BLADE LGTH.	OVER. LGTH.	WT., LBS.
		ALL HDS.	FLAT, OVAL	PAN	FILL.			
9693	5/32"	8	6†	6, 10	10	4"	7 3/8"	.19
9694	3/16"	..	10‡	12	12	4"	7 3/8"	.20
9695	1/4"	14, 1/4"	12	..	..	5"	9"	32
9696	5/16"	5/16"	5/16"■	3/8"	3/8"	5"	9 3/8"	.40

†Also #10 Hexagon. ‡Also #10 Truss & #12 Binding. ■Also 3/8" Truss, Hex & Binding.

PHILLIPS WOOD-HANDLE SCREWDRIVERS

NO.	PHILLIPS TIP NO.	SHANK DIAM.	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
✱ 9782	1	3/16"	3"	6 1/4"	.07
✱ 9784	2	1/4"	4"	8 7/8"	.18
✱ 9786	3	5/16"	6"	11 7/8"	.34
9788	4	3/8"	8"	14 1/2"	.52

SCREW-HOLDING SCREWDRIVERS.

Three sizes fit all needs. Engineered to hold screw with 5 to 9 inch-pounds pressure for starting into material, with easy twist of fingers.

NO.	LENGTH	WT., LBS.
9851	2 1/2"	.05
9853	5"	.1
9855	9"	.1

OFFSET SCREWDRIVERS.

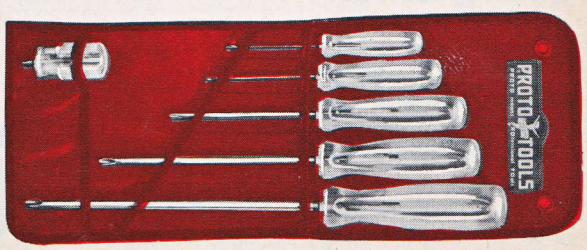
For work in close places, drag link and brake adjustments. Bits are at right angles to each other.

NO.	BIT WIDTH	LENGTH	WT., LBS.
35 1/4	1/4"	3"	.05
✱36 1/4	1/4"	4 5/8"	.07
✱36 5/16	5/16"	5"	.11
✱36 3/8	3/8"	6 1/8"	.19

KEY RING SCREWDRIVER

The perfect gift. Has hundreds of uses.

NO.	BIT WIDTH	LENGTH	WT., LBS.
100	3/16"	2 1/4"	.015



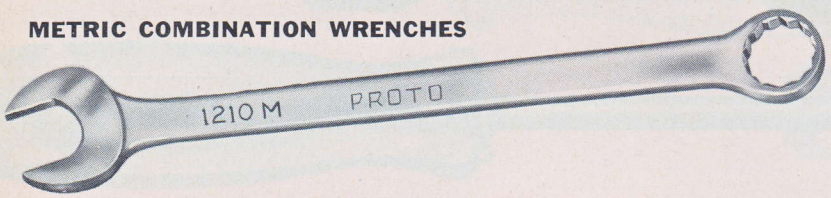
SET 9600A Phillips Screwdriver Set—Plastic Handle, Round Shank
Contents: 9671, 9680, 9682, 9684, 9686, 9688, Kit 2426. Wt. 1.40 lbs.

METRIC WRENCHES AND SETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

Metric size sockets combination and open end wrenches for foreign cars, machinery and equipment are made on standard PROTO dies from fully guaranteed PROTOLOY® steels. Critical openings are exactly broached to meet all requirements of the professional mechanic.

METRIC COMBINATION WRENCHES



NO.	OPENING SIZES, MM.	LENGTH, INCHES	WT., LBS.
1210M	10	4 7/8	.06
1211M	11	5 1/4	.10
1212M	12	5 5/8	.10
1213M	13	6	.14
1214M	14	6 3/4	.20
1215M	15	7 1/2	.20
1216M	16	7 1/2	.27
1217M	17	8 1/4	.34
1218M	18	8 3/4	.34
1219M	19	9 1/4	.45
1220M	20	10 1/4	.55
1222M	22	11 1/4	.65

METRIC COMBINATION WRENCHES AND SET

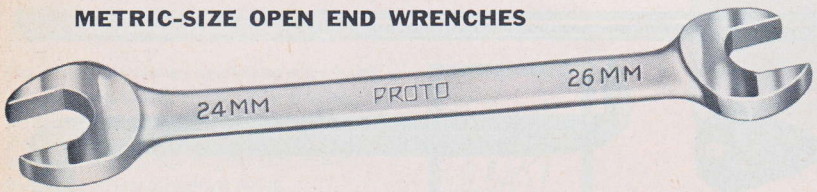
Seven most used sizes—11mm, 12mm, 13mm, 14mm, 16mm, 17mm, and 19mm. Comes in bright red and blue plastic kit. Each Proto Metric Wrench is properly broached and drop-forged to assure the right combination of strength and toughness at the most critical places.

CONTENTS SET NO. 1200 M

NO.	SIZE OF OPENINGS	LENGTH
1211M	11mm	5 1/4"
1212M	12mm	5 5/8"
1213M	13mm	6"
1214M	14mm	6 3/4"
1216M	16mm	7 1/2"
1217M	17mm	8 1/4"
1219M	19mm	9 1/4
2404M	Vinyl Kit	

Weight, 1.80 Lbs.

METRIC-SIZE OPEN END WRENCHES



Forged from fine alloy steel and properly heat treated for extra strength and toughness. Openings are accurately machined. The ten wrenches provide all openings from 6 through 24 millimeters by 1-millimeter steps, plus a 26-millimeter opening.

NO.	NOMINAL OPENING SIZES, MM.	HEAD THICKNESS, INCHES	LENGTH, INCHES	WT., LBS.
30607	6 x 7	.172	4 1/2	.04
30809	8 x 9	.203	4 7/8	.06
31011	10 x 11	.219	5 1/4	.07
31213	12 x 13	.250	5 5/8	.12
31415	14 x 15	.296	6 3/4	.23
31617	16 x 17	.328	8 1/8	.22
31819	18 x 19	.344	8 9/16	.38
32022	20 x 22	.370	10	.60
32123	21 x 23	.370	10 1/2	.56
32426	24 x 26	.437	11 1/8	.78

METRIC-SIZE OPEN END WRENCH SETS

CONTENTS SET NO. 30000A

NO.	OPENING SIZES MM.	LENGTH, INCHES
30607	6 x 7	4 1/2
30809	8 x 9	4 7/8
31011	10 x 11	5 1/4
31213	12 x 13	5 5/8
31415	14 x 15	6 3/4
31617	16 x 17	8 1/8
31819	18 x 19	8 9/16
32022	20 x 22	10
32123	21 x 23	10 1/2
32426	24 x 26	11 1/8
2414 Vinyl Kit		

Weight, 3.4 Lbs.

CONTENTS SET NO. 30000R

NO.	OPENING SIZES, MM.	LENGTH, INCHES
30809	8 x 9	4 7/8
31011	10 x 11	5 1/4
31213	12 x 13	5 5/8
31415	14 x 15	6 3/4
31617	16 x 17	8 1/8
31819	18 x 19	8 9/16
2407 Vinyl Kit		

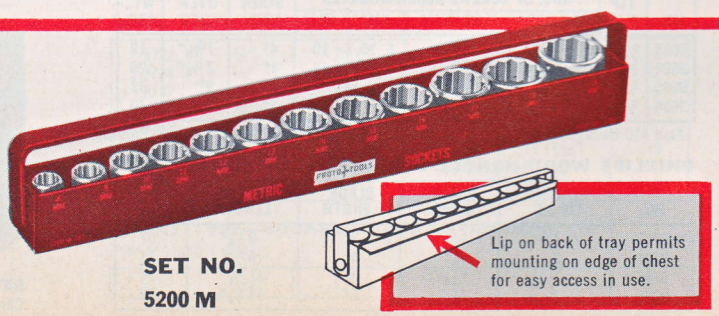
Weight, 1.20 Lbs.

METRIC SOCKET SET

SET NO. 5200M (12 Sockets & Tray)

Includes 12 metric sockets indicated by red star ★ in 3/8" Drive Socket listing see opposite page.

Twelve sizes 3/8" sq. drive, 12 point, Metric sockets in red-lacquered tray—keeps sockets separate from look-alike Standard sockets in mechanic's tool chest. All sockets hot-punched in special analysis alloy steel, quality chrome plate. Size and numbers stenciled on tray. Spillproof locking band.



SET NO. 5200 M

METRIC SOCKETS, WHITWORTH WRENCHES AND SOCKETS

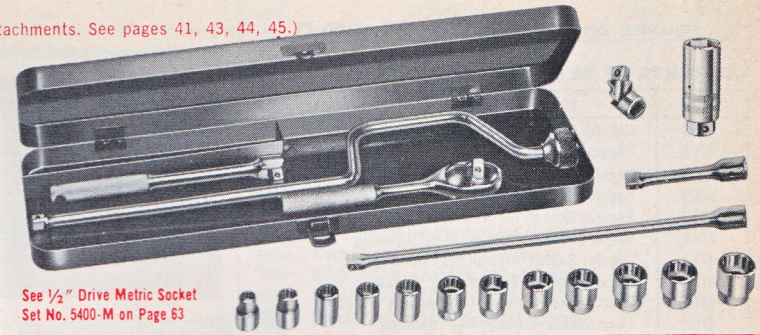
(All socket drive ends fit regular U.S. Standard ratchets and attachments. See pages 41, 43, 44, 45.)

METRIC SOCKET SET NO. 5200ABM

Includes 12 metric sockets indicated by red star ★ in 3/8" Drive Socket listing below.

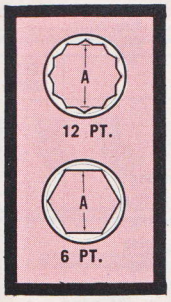
Set also includes the following:

5026HP	Spark Plug Socket, 12 pt., 13/16" opening
5249	Ratchet, 7"
5260	Extension, 3 1/2"
5262	Extension, 12"
5265	Hinge Handle, 7 3/8"
5270	Universal Joint
5280	Speed Handle, 16 7/8"
5295	Steel Box, 18 1/2" x 5 1/4" x 1 1/2"



See 1/2" Drive Metric Socket Set No. 5400-M on Page 63

4704 M 5208 M 5412 M



1/4" SQUARE DRIVE SOCKETS 6-Pt.

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
4704M	4	7/8	.01
4705M	5	7/8	.02
4706M	6	7/8	.02
4707M	7	7/8	.02
4708M	8	7/8	.02
4709M	9	7/8	.03
4710M	10	7/8	.03
4711M	11	7/8	.04
4712M	12	7/8	.05

METRIC SOCKET WRENCHES IN 1/4", 3/8" AND 1/2" SQUARE DRIVE SIZES

★ 3/8" SQUARE DRIVE SOCKETS 12-Pt.

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5208M	8	1	.04
5209M	9	1	.04
5210M	10	1	.05
5211M	11	1	.05
5212M	12	1	.06
5213M	13	1	.06
5214M	14	1	.06
5215M	15	1	.08
5216M	16	1	.07
5217M	17	1 1/16	.08
5218M	18	1 1/16	.10
5219M	19	1 3/16	.13

1/2" SQUARE DRIVE SOCKETS 12-Pt.

NO.	OPENING SIZE, MM.	LENGTH, INCHES	WT., LBS.
5412M	12	1 13/32	.10
5413M	13	1 13/32	.11
5414M	14	1 13/32	.10
5415M	15	1 13/32	.11
5416M	16	1 13/32	.16
5417M	17	1 13/32	.13
5418M	18	1 13/32	.17
5419M	19	1 13/32	.16
5420M	20	1 13/32	.18
5421M	21	1 13/32	.21
5422M	22	1 17/32	.28
5423M	23	1 17/32	.32
5424M	24	1 17/32	.37
5425M	25	1 17/32	.30
5426M	26	1 17/32	.32
5427M	27	1 17/32	.31
5428M	28	1 25/32	.49
5429M	29	1 25/32	.46
5430M	30	1 25/32	.47
5432M	32	1 25/32	.49

WHITWORTH WRENCHES

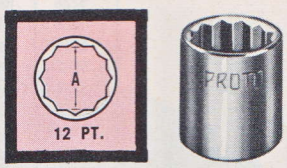
Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.

COMBINATION WRENCHES

NO.	WHITWORTH SIZE BOLT	WRENCH OP. SIZE	TOTAL LENGTH	WT. LBS.
1206W	3/16	.340"	4"	.13
1208W	1/4	.445"	5 1/4"	.18
1210W	5/16	.525"	6"	.25
1212W	3/8	.600"	7 1/2"	.32

WHITWORTH SOCKETS*

Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.



3/8" DRIVE SOCKETS 12-PT.

NO.	WHITWORTH SIZE BOLT	SOCKET SIZE	TOTAL LENGTH	WT. LBS.
5206W	3/16	.340"	1 1/16"	.04
5208W	1/4	.445"	1 1/16"	.06
5210W	5/16	.525"	1 1/8"	.07
5212W	3/8	.600"	1 1/8"	.11

METRIC CONVERSION TABLE

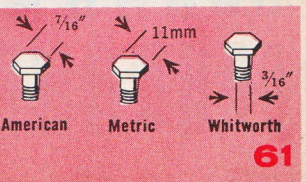
INCHES FRACTIONS	INCHES DECIMALS	M M
—	.0004	.01
—	.004	.10
—	.01	.25
1/64	.0156	.397
—	.0197	.50
—	.0295	.75
1/32	.03125	.794
—	.0394	1.
3/64	.0469	1.191
—	.059	1.5
1/16	.062	1.588
5/64	.0781	1.984
—	.0787	2.
3/32	.094	2.381
—	.0984	2.5
7/64	.109	2.778
—	.1181	3.
1/8	.125	3.175
—	.1378	3.5
9/64	.141	3.572
5/32	.156	3.969
—	.1575	4.
11/64	.172	4.366
—	.177	4.5
3/16	.1875	4.763
—	.1969	5.
13/64	.203	5.159
—	.2165	5.5
7/32	.219	5.556
15/64	.234	5.953

INCHES FRACTIONS	INCHES DECIMALS	M M
—	.2362	6.
1/4	.250	6.350
—	.2559	6.5
17/64	.2656	6.747
—	.2756	7.
9/32	.281	7.144
—	.2953	7.5
19/64	.297	7.541
5/16	.312	7.938
—	.315	8.
21/64	.328	8.334
—	.335	8.5
11/32	.344	8.731
—	.3543	9.
23/64	.359	9.128
—	.374	9.5
3/8	.375	9.525
25/64	.391	9.922
—	.3937	10.
13/32	.406	10.319
—	.413	10.5
27/64	.422	10.716
—	.4331	11.
7/16	.438	11.113
29/64	.453	11.509
15/32	.469	11.906
—	.4724	12.
31/64	.484	12.303
—	.492	12.5
1/2	.500	12.700

INCHES FRACTIONS	INCHES DECIMALS	M M
—	.5118	13.
33/64	.5156	13.097
17/32	.531	13.494
35/64	.547	13.891
—	.5512	14.
9/16	.563	14.288
—	.571	14.5
37/64	.578	14.684
—	.5906	15.
19/32	.594	15.081
39/64	.609	15.478
5/8	.625	15.875
—	.6299	16.
41/64	.6406	16.272
—	.6496	16.5
21/32	.656	16.669
—	.6693	17.
43/64	.672	17.066
11/16	.6875	17.463
45/64	.703	17.859
—	.7087	18.
23/32	.719	18.256
—	.7283	18.5
47/64	.734	18.653
—	.7480	19.
3/4	.750	19.050
49/64	.7656	19.447
25/32	.781	19.844
—	.7874	20.
51/64	.797	20.241

INCHES FRACTIONS	INCHES DECIMALS	M M
13/16	.8125	20.638
—	.8268	21.
53/64	.828	21.034
27/32	.844	21.431
55/64	.859	21.828
—	.8661	22.
7/8	.875	22.225
57/64	.8906	22.622
—	.9055	23.
29/32	.9062	23.019
59/64	.922	23.416
15/16	.9375	23.813
—	.9449	24.
61/64	.953	24.209
31/32	.969	24.606
—	.9843	25.
63/64	.9844	25.003
1	1.000	25.400
—	1.0236	26.

Amercan and Metric wrench sizes are taken across the flats of the bolt head; Whitworth size is taken from outside diameter of threads.

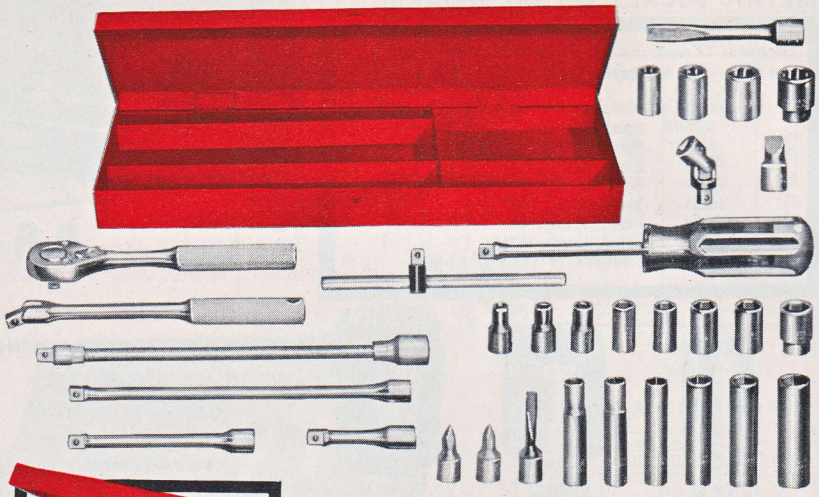


MASTER SOCKET WRENCH SETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

1/4" SQUARE DRIVE 32-PC. SET NO. 4700-D

A Utility set for auto, aircraft and all repair and assembly work where tiny socket wrenches are necessary.

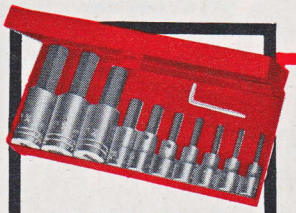


CONTENTS OF SET NO. 4700-D

NO.	DESCRIPTION
4706	Regular Socket, 6-Point, 3/16" Opening
4707	Regular Socket, 6-Point, 7/32" Opening
4708	Regular Socket, 6-Point, 1/4" Opening
4709	Regular Socket, 6-Point, 9/32" Opening
4710	Regular Socket, 6-Point, 5/16" Opening
4711	Regular Socket, 6-Point, 11/32" Opening
4712	Regular Socket, 6-Point, 3/8" Opening
4714	Regular Socket, 6-Point, 7/16" Opening
4708L	Deep Socket, 6-Point, 1/4" Opening
4709L	Deep Socket, 6-Point, 9/32" Opening
4710L	Deep Socket, 6-Point, 5/16" Opening
4711L	Deep Socket, 6-Point, 11/32" Opening
4712L	Deep Socket, 6-Point, 3/8" Opening
4714L	Deep Socket, 6-Point, 7/16" Opening
4708S	Regular Socket, 8-Point, 1/4" Opening
4710S	Regular Socket, 8-Point, 5/16" Opening
4712S	Regular Socket, 8-Point, 3/8" Opening
4716T	Regular Socket, 12-Point, 1/2" Opening
4737	Phillips Socket Screw Driver, #1
4738	Phillips Socket Screw Driver, # 2
4743	Socket Screw Driver, 3/8" Tip
4744	Socket Screw Driver, 3/16" Tip
4745	Socket Screw Driver, 1/4" Tip
4749	Ratchet
4759	Extension, 2"
4760	Extension, 4"
4761	Extension, 6"
4765	Flexible Extension, 6"
4766	Hinge Handle
4769	Plastic Handle
4770	Universal Joint
4785	Sliding Bar
4796	Metal Box

Weight of Set, 2.93 Lbs.

(Boxes available separately, See Page 70)

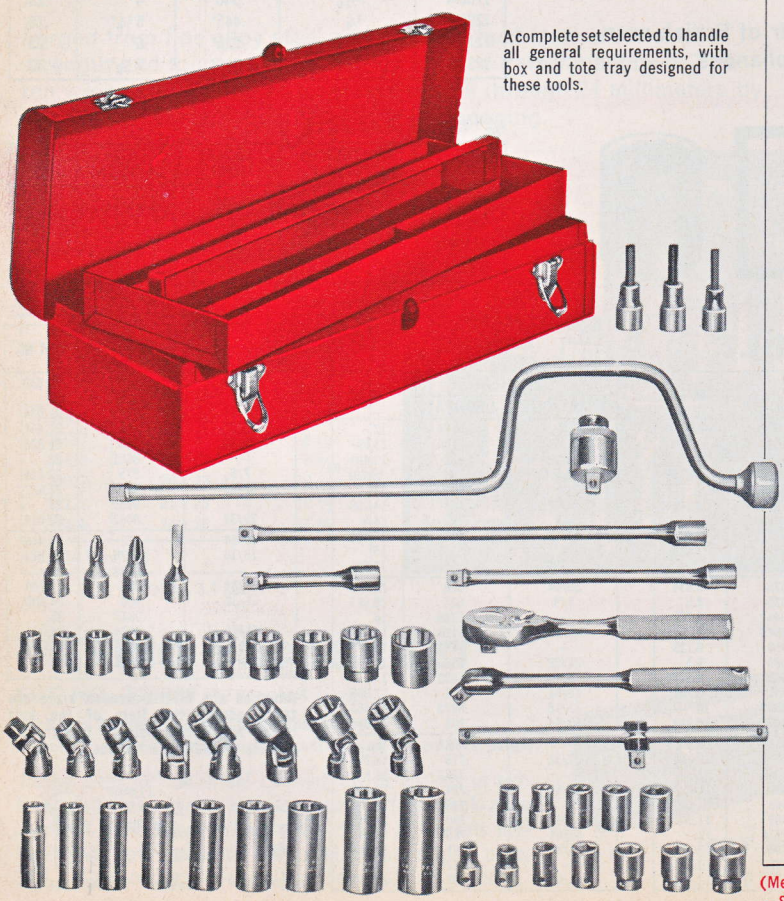


SET NO. 4900A HOLLOW HEAD SCREW SOCKETS

No. 4997 box holds 10 Allen-type Sockets: Seven 3/8" drive with bits 1/8" through 3/8", three 1/2" drive with bits 1/2", 9/16", 5/8". See red star items ★ pages 42 and 44 for individual sockets.

3/8" SQUARE DRIVE 54-PC. GENERAL SET NO. 5200-G

A complete set selected to handle all general requirements, with box and tote tray designed for these tools.



CONTENTS OF SET NO. 5200-G

NO.	DESCRIPTION	SET 5200-G
4990-3/16	Allen Type Socket, 3/16" Bit	1
4990-7/32	Allen Type Socket, 7/32" Bit	1
4990-1/4	Allen Type Socket, 1/4" Bit	1
5012	Deep Socket, 12-Point, 3/8" Opening	1
5014	Deep Socket, 12-Point, 7/16" Opening	1
5016	Deep Socket, 12-Point, 1/2" Opening	1
5018	Deep Socket, 12-Point, 9/16" Opening	1
5020	Deep Socket, 12-Point, 5/8" Opening	1
5022	Deep Socket, 12-Point, 11/16" Opening	1
5024	Deep Socket, 12-Point, 3/4" Opening	1
5026	Deep Socket, 12-Point, 13/16" Opening	1
5028	Deep Socket, 12-Point, 7/8" Opening	1
5212	Regular Socket, 12-Point, 3/8" Opening	1
5214	Regular Socket, 12-Point, 7/16" Opening	1
5216	Regular Socket, 12-Point, 1/2" Opening	1
5218	Regular Socket, 12-Point, 9/16" Opening	1
5219	Regular Socket, 12-Point, 19/32" Opening	1
5220	Regular Socket, 12-Point, 5/8" Opening	1
5222	Regular Socket, 12-Point, 11/16" Opening	1
5224	Regular Socket, 12-Point, 3/4" Opening	1
5226	Regular Socket, 12-Point, 13/16" Opening	1
5228	Regular Socket, 12-Point, 7/8" Opening	1
5210H	Regular Socket, 6-Point, 5/16" Opening	1
5212H	Regular Socket, 6-Point, 3/8" Opening	1
5214H	Regular Socket, 6-Point, 7/16" Opening	1
5216H	Regular Socket, 6-Point, 1/2" Opening	1
5218H	Regular Socket, 6-Point, 9/16" Opening	1
5220H	Regular Socket, 6-Point, 5/8" Opening	1
5222H	Regular Socket, 6-Point, 11/16" Opening	1
5208S	Regular Socket, 8-Point, 1/4" Opening	1
5210S	Regular Socket, 8-Point, 5/16" Opening	1
5212S	Regular Socket, 8-Point, 3/8" Opening	1
5214S	Regular Socket, 8-Point, 7/16" Opening	1
5216S	Regular Socket, 8-Point, 1/2" Opening	1
5241	Phillips Socket Screw Driver, #2	1
5242	Phillips Socket Screw Driver, #3	1
5243	Phillips Socket Screw Driver, #4	1
5246	Socket Screw Driver, 1/4" x .030" Tip	1
5247	Ratchet Adaptor	1
5249	Ratchet	1
5260	Extension, 3 1/2"	1
5261	Extension, 7 1/2"	1
5262	Extension, 12"	1
5265	Hinge Handle	1
5270	Universal Joint	1
5273	Universal Socket, 12-Point, 3/8" Opening	1
5274	Universal Socket, 12-Point, 7/16" Opening	1
5275	Universal Socket, 12-Point, 1/2" Opening	1
5276	Universal Socket, 12-Point, 9/16" Opening	1
5277	Universal Socket, 12-Point, 5/8" Opening	1
5278	Universal Socket, 12-Point, 11/16" Opening	1
5279	Universal Socket, 12-Point, 3/4" Opening	1
5280	Speed Handle	1
5285	Sliding Bar	1
5296	Metal Box (10.0 Lbs.)	1

(Metal Boxes Available Separately. —See Pages 69-70)

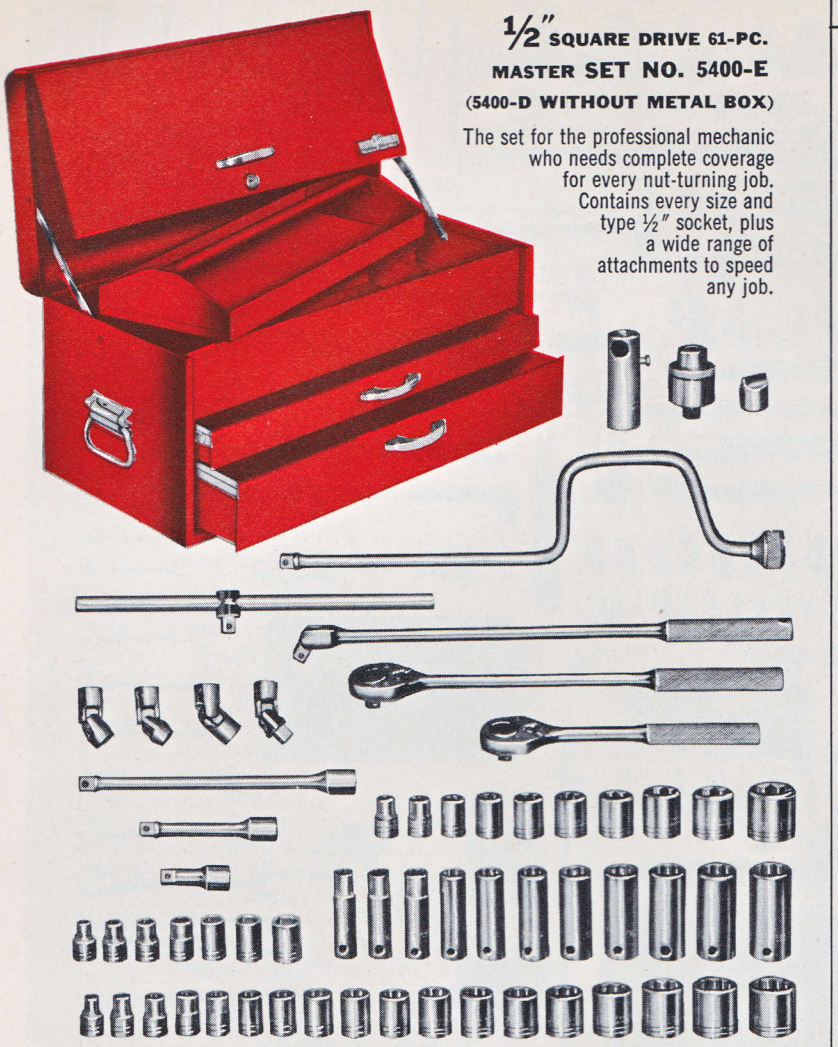
Weight of Set 17.53 Lbs.

MASTER SOCKET WRENCH SETS

½" SQUARE DRIVE 61-PC. MASTER SET NO. 5400-E

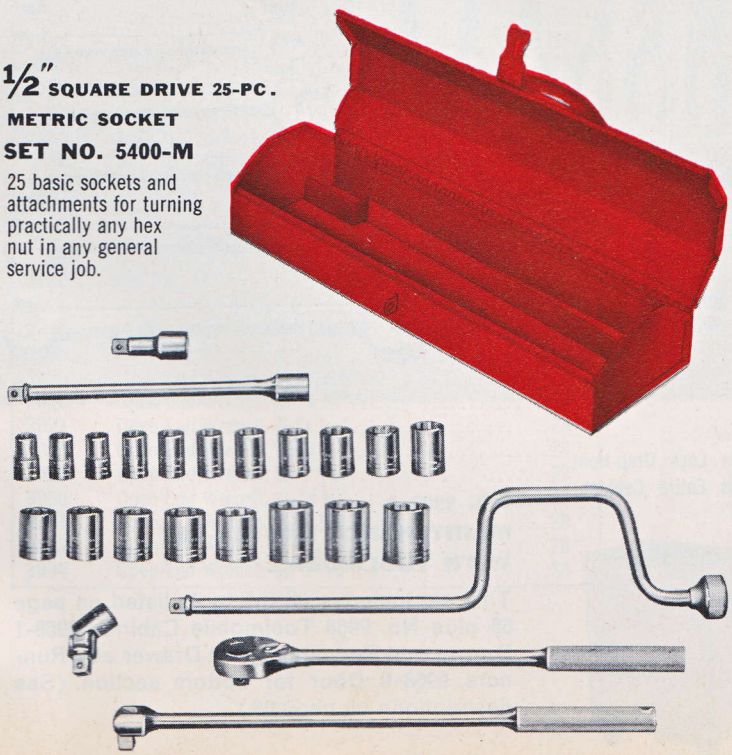
(5400-D WITHOUT METAL BOX)

The set for the professional mechanic who needs complete coverage for every nut-turning job. Contains every size and type ½" socket, plus a wide range of attachments to speed any job.



½" SQUARE DRIVE 25-PC. METRIC SOCKET SET NO. 5400-M

25 basic sockets and attachments for turning practically any hex nut in any general service job.



CONTENTS OF SETS NO. 5400-E AND 5400-M

NO.	DESCRIPTION	SET 5400-E *5400-D	SET 5400-M
4515	Stud Remover	1	
5316	Deep Socket, 12-Point, ½" Opening	1	
5318	Deep Socket, 12-Point, 9/16" Opening	1	
5320	Deep Socket, 12-Point, 5/8" Opening	1	
5322	Deep Socket, 12-Point, 11/16" Opening	1	
5324	Deep Socket, 12-Point, ¾" Opening	1	
5326	Deep Socket, 12-Point, 13/16" Opening	1	
5328	Deep Socket, 12-Point, 7/8" Opening	1	
5330	Deep Socket, 12-Point, 15/16" Opening	1	
5332	Deep Socket, 12-Point, 1" Opening	1	
5334	Deep Socket, 12-Point, 1 1/16" Opening	1	
5336	Deep Socket, 12-Point, 1 1/8" Opening	1	
5412	Regular Socket, 12-Point, 3/8" Opening	1	
5414	Regular Socket, 12-Point, 7/16" Opening	1	
5416	Regular Socket, 12-Point, ½" Opening	1	
5418	Regular Socket, 12-Point, 9/16" Opening	1	
5419	Regular Socket, 12-Point, 19/32" Opening	1	
5420	Regular Socket, 12-Point, 5/8" Opening	1	
5422	Regular Socket, 12-Point, 11/16" Opening	1	
5424	Regular Socket, 12-Point, ¾" Opening	1	
5425	Regular Socket, 12-Point, 25/32" Opening	1	
5426	Regular Socket, 12-Point, 13/16" Opening	1	
5428	Regular Socket, 12-Point, 7/8" Opening	1	
5429	Regular Socket, 12-Point, 29/32" Opening	1	
5430	Regular Socket, 12-Point, 15/16" Opening	1	
5432	Regular Socket, 12-Point, 1" Opening	1	
5434	Regular Socket, 12-Point, 1 1/16" Opening	1	
5436	Regular Socket, 12-Point, 1 1/8" Opening	1	
5438	Regular Socket, 12-Point, 1 3/16" Opening	1	
5440	Regular Socket, 12-Point, 1 ¼" Opening	1	
5412H	Regular Socket, 6-Point, 3/8" Opening	1	
5414H	Regular Socket, 6-Point, 7/16" Opening	1	
5416H	Regular Socket, 6-Point, ½" Opening	1	
5418H	Regular Socket, 6-Point, 9/16" Opening	1	
5420H	Regular Socket, 6-Point, 5/8" Opening	1	
5422H	Regular Socket, 6-Point, 11/16" Opening	1	
5424H	Regular Socket, 6-Point, ¾" Opening	1	
5412S	Regular Socket, 8-Point, 3/8" Opening	1	
5414S	Regular Socket, 8-Point, 7/16" Opening	1	
5416S	Regular Socket, 8-Point, ½" Opening	1	
5418S	Regular Socket, 8-Point, 9/16" Opening	1	
5420S	Regular Socket, 8-Point, 5/8" Opening	1	
5422S	Regular Socket, 8-Point, 11/16" Opening	1	
5424S	Regular Socket, 8-Point, ¾" Opening	1	
5426S	Regular Socket, 8-Point, 13/16" Opening	1	
5428S	Regular Socket, 8-Point, 7/8" Opening	1	
5432S	Regular Socket, 8-Point, 1" Opening	1	
5412M	Metric Socket, 12-Point, 12MM Opening		1
5413M	Metric Socket, 12-Point, 13MM Opening		1
5414M	Metric Socket, 12-Point, 14MM Opening		1
5415M	Metric Socket, 12-Point, 15MM Opening		1
5416M	Metric Socket, 12-Point, 16MM Opening		1
5417M	Metric Socket, 12-Point, 17MM Opening		1
5418M	Metric Socket, 12-Point, 18MM Opening		1
5419M	Metric Socket, 12-Point, 19MM Opening		1
5420M	Metric Socket, 12-Point, 20MM Opening		1
5421M	Metric Socket, 12-Point, 21MM Opening		1
5422M	Metric Socket, 12-Point, 22MM Opening		1
5423M	Metric Socket, 12-Point, 23MM Opening		1
5424M	Metric Socket, 12-Point, 24MM Opening		1
5425M	Metric Socket, 12-Point, 25MM Opening		1
5426M	Metric Socket, 12-Point, 26MM Opening		1
5427M	Metric Socket, 12-Point, 27MM Opening		1
5428M	Metric Socket, 12-Point, 28MM Opening		1
5429M	Metric Socket, 12-Point, 29MM Opening		1
5430M	Metric Socket, 12-Point, 30MM Opening		1
5446	Screw Driver Socket, 15/16" x .150"	1	
5447	Ratchet Adapter	1	
5449	Ratchet, 10"	1	1
5450	Ratchet, 15"	1	
5460	Extension, 2½"	1	1
5461	Extension, 5"	1	
5463	Extension, 10"	1	1
5468	Hinge Handle	1	1
5470	Universal Joint	1	1
5475	Universal Socket, 12-Point, ½" Opening	1	
5476	Universal Socket, 12-Point, 9/16" Opening	1	
5477	Universal Socket, 12-Point, 5/8" Opening	1	
5480	Speed Handle	1	1
5485	Sliding Handle	1	
5496	Metal Box		1
9991	Metal Box	1	

(Metal Boxes Available Separately. See Pages 69-70)

* 5400-D is same as 5400-E but without Metal Box	Weight of Set 5400-D...	25.03 Lb	14.95 Lb
	Weight of Box 9991.....	31.00 Lb	
	Weight of Set 5400-E....	56.03 Lb	

Single Lock Drop-front Closes Entire Cabinet

NO. 9902-A
MAINTENANCE MASTER SET WITH TOOLMOBILE

This set includes all the tools listed on page 65 plus No. 9968 Toolmobile Cabinet, 9968-1 Drawer and Runners, 9968-2 Drawer and Runners, 9968-6 Door for bottom section. (See descriptions on page 68.)

NO. 9902-A MAINTENANCE MASTER SET

WITH TOOLMOBILE. PROTO custom-balanced this complete set of 286 tools to fill the job requirements of all types of factory, utility, railroad, refinery and other industrial maintenance. The selection is perfect for mechanics who repair automobiles, trucks, buses, aircraft, tractors, farm implements and construction equipment. TOOLMOBILE cabinets are job-designed for orderly, secure storage of a complete set of tools and easy moving of tools to the job. Interchangeable drawers and partitions enable you to arrange many combinations to suit your own convenience. See page 68 for detailed description of Toolmobile features.

CONTENTS OF NO. 9902-A MAINTENANCE MASTER SET Weight, 286 Tools and Toolmobile, 302.49 Lbs.

NO.	DESCRIPTION	PAGE
000 A	Standard Gauge Set	2
000 K	Spark Plug Gauge Set	2
2	Punch and Chisel Set, 12"	5
202	Thin Jaw Plier, 6 ½"	6
203	Bent Nose Plier, 6 ¾"	6
206	Diagonal Plier, 6"	6
225	Curved Needle Nose Plier, 6"	8
226	Needle Nose Plier, 6¾"	8
243	Power-Track Plier, 10"	10
246	Combination Side Cutting Plier, 6"	10
248 P	Pipe Jaw Plier, 11 ¼"	10
252	Hose Clamp Plier, 8 ¼"	11
278	Slip Joint Plier, 8"	11
291	Lever Wrench Plier, 8"	11
299	Wire Stripper Plier, 5"	12
310	Duck Bill Snip, 10"	14
352	Adjustable Hack Saw	14
708 L	Adjustable Wrench, 8"	16
712 L	Adjustable Wrench, 12"	16
814	Pipe Wrench, 14"	17
1122	Box Wrench, 3/8"x 7/16"	19
1125	Box Wrench, 7/16"x ½"	19
1126	Box Wrench, ½"x 9/16"	19
1130	Box Wrench, 9/16"x 5/8"	19
1131	Box Wrench, 5/8"x ¾"	19
1136	Box Wrench, 11/16"x 7/8"	19
1137	Box Wrench, 11/16"x 25/32"	19
1139	Box Wrench, ¾"x 7/8"	19
1145	Box Wrench, 15/16"x 1"	19
1150	Box Wrench, 1 1/16"x 1 1/8"	19
1155	Box Wrench, 1 ¼" x 1 5/16"	19
1160	Box Wrench, 1 ¼"x 1 3/8"	19
1162	Box Wrench, 1 7/16"x 1 ½"	19
1164	Box Wrench, 1 5/8"x 1 11/16"	19
1304 P	Ball Pein Hammer, 4 ounce	24
1312 P	Ball Pein Hammer, 12 ounce	24
1316 P	Ball Pein Hammer, 16 ounce	24
1362	Plastic Tip Hammer, 16 ounce	24
1725	Obstruction Wrench	23
1730	Obstruction Wrench	28
2120	Pry Bar, 18"	26
2126	Pry Bar, Roll Head, 16"	26
2336	Gasket Scraper	37
2342	Grab All, 18"	38
3018	Open End Wrench, ¼"x 5/16"	28
3020	Open End Wrench, 5/16"x 3/8"	28
3021	Open End Wrench, 3/8"x 7/16"	28
3025	Open End Wrench, 7/16"x ½"	28
3026	Open End Wrench, ½"x 9/16"	28
3030	Open End Wrench, 9/16"x 5/8"	28
3031	Open End Wrench, 5/8"x ¾"	28
3033	Open End Wrench, 19/32"x 11/16"	28
3034	Open End Wrench, 5/8"x 11/16"	28
3035	Open End Wrench, 11/16"x ¾"	28
3038	Open End Wrench, 1 3/16"x 25/32"	28
3039	Open End Wrench, ¾"x 7/8"	28
3042	Open End Wrench, 7/8"x 15/16"	28
3045	Open End Wrench, 15/16"x 1"	28
3048	Open End Wrench, 1"x 1 1/8"	28
3050	Open End Wrench, 1 1/16"x 1 1/8"	28
3051	Open End Wrench, 1 1/16"x 1 ¼"	28
3055	Open End Wrench, 1 ¼"x 1 5/16"	28
3060	Open End Wrench, 1 3/8"x 1 7/16"	28
3070	Open End Wrench, 1 ½"x 1 5/8"	28
3200 C	Ignition Wrench Set, 13 piece	28
3714	Flare Nut Wrench	30
3716	Flare Nut Wrench	30
3718	Flare Nut Wrench	30
3720	Flare Nut Wrench	30
4700 B	Drive Socket Set, ¼", 12 piece	41
4977	Hex Wrench Set, 7 piece	38
4900 A	Hex Wrench Socket Set, 10"	44
5200 G	General Socket Set, 3/8" Drive (Tools Only, 54 pieces)	62
5400 D	Master Socket Set, ½" Drive (Tools Only, 61 pieces)	63
5500 A	Heavy Duty Socket Set, ¾" Square Drive (Tools Only, 29 pieces)	47
6016	Torque Wrench, ½" Drive, Ratchet Hd	50
9500 A	Screw Extractors, 5 Piece	57
9624	Screwdriver, Cabinet, 1/8"x 4"	58
9634	Screwdriver, Cabinet, 3/16"x 6"	58
9636	Screwdriver, Cabinet, ¼"x 10"	58
9652	Screwdriver, ¼"x 1 ½" Blade	59
9671	Phillips Screwdriver, #2 point Stubby	59
9680	Phillips Screwdriver, #0 point	59
9682	Phillips Screwdriver, #1 point	59
9684	Phillips Screwdriver, #2 point	59
9686	Phillips Screwdriver, #3 point	59
9688	Phillips Screwdriver, #4 point	59
9804	Screwdriver, ¼"x 4" Blade	58
9806	Screwdriver, 5/16"x 6" Blade	58
9808	Screwdriver, 3/8"x 8" Blade	58
9812	Screwdriver, 3/8"x 12" Blade	58
9832	Screwdriver, 3/16"x 4" Blade	58
9968	Toolmobile Cabinet	68
9968-1	Toolmobile Drawer	68
9968-2	Toolmobile Drawer	68
9968-6	Toolmobile Door for bottom section	68

NO. 9901-A MAINTENANCE MASTER SET TOOLS ONLY. NO TOOLMOBILE

This set includes all the tools in Set No. 9902-A listed above, minus Toolmobile Cabinet No. 9968, 9968-1, 9968-2 and 9968-6.

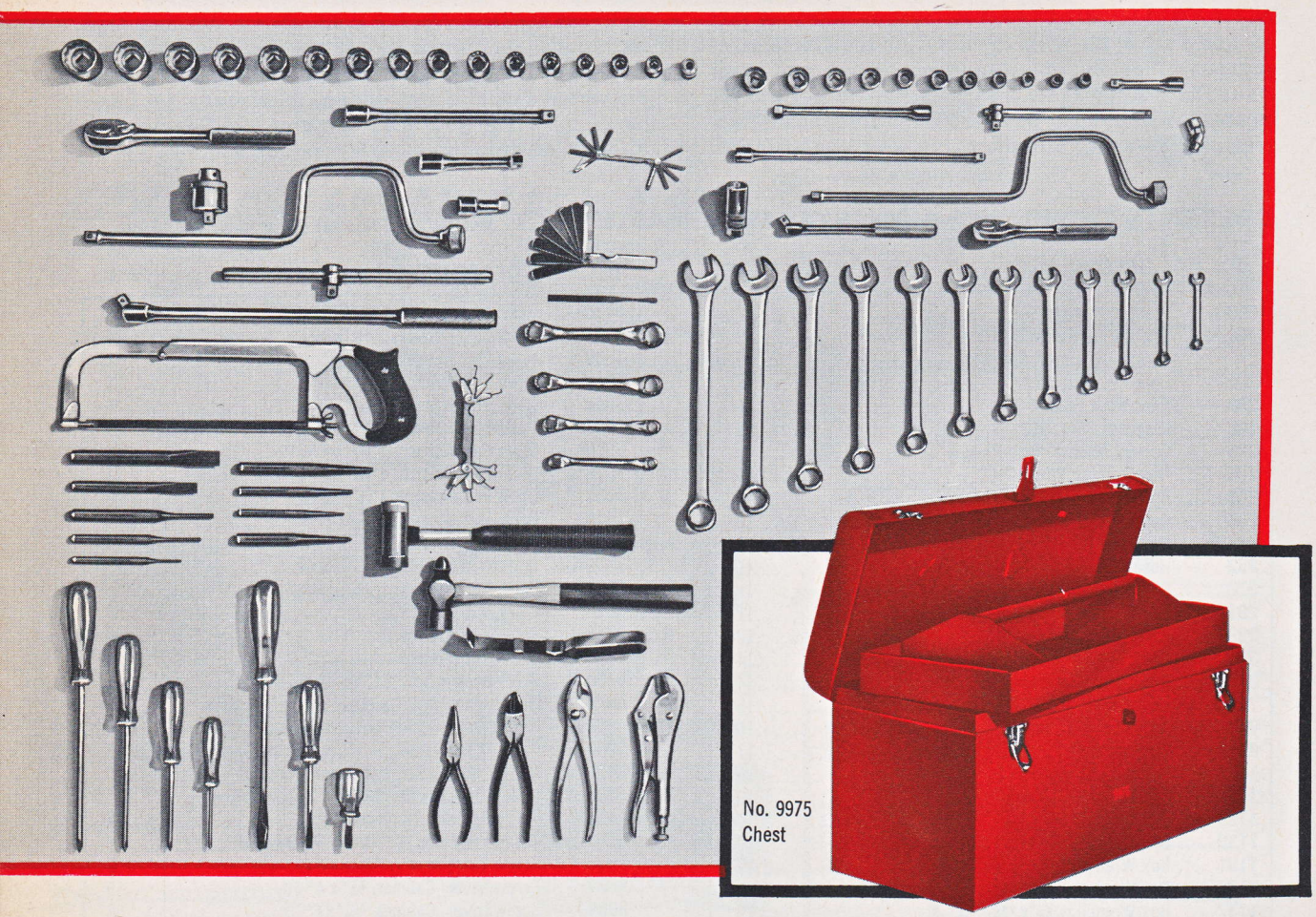
Weight, tools only, 171.79 Pounds.

SET NO. 9912 BASIC TOOL SET

(SET NO. 9911 SEE BOTTOM OF PAGE)

PROTO TOOLS PROFESSIONAL QUALITY TOOLS

This popular PROTO set includes 88 most needed tools for the mechanic's everyday service and repair requirements. It is an ideal basic starting set to which other tools may be added as needs arise.



No. 9975 Chest

NO.	DESCRIPTION	PAGE
000 A	Feeler Gauge Set	2
000 D	Ignition Gauge Set	2
000 K	Spark Plug Gauge Set	2
41 1/2	Center Punch, 1/2" x 5 5/8"	5
47 5/16 x 1/8	Pin Punch, 1/8" x 5 1/4"	5
47 3/8 x 3/16	Pin Punch, 3/16" x 6 1/8"	5
47 1/2 x 1/4	Pin Punch, 1/4" x 6 3/4"	5
50 5/16	Starting Punch, 1/8" x 5 5/32"	5
50 3/8	Starting Punch, 3/16" x 5 21/32"	5
50 1/2	Starting Punch, 1/4" x 6 1/2"	5
86 A 7/16	Cold Chisel, 1/2" x 6 3/16"	5
86 A 5/8	Cold Chisel, 3/4" x 7 3/16"	5
207	Diagonal Cutting Plier, 7"	6
220	Chain Nose Plier, 6 3/4"	6
278	Slip Joint Plier, 8"	11
291	Lever Wrench Plier	11
352	Hack Saw	14
1210	Comb. Wrench, 12 Pt. 5/16"	21
1212	Comb. Wrench, 12 Pt. 3/8"	21
1214	Comb. Wrench, 12 Pt. 7/16"	21
1216	Comb. Wrench, 12 Pt. 1/2"	21
1218	Comb. Wrench, 12 Pt. 9/16"	21
1220	Comb. Wrench, 12 Pt. 5/8"	21
1222	Comb. Wrench, 12 Pt. 11/16"	21
1224	Comb. Wrench, 12 Pt. 3/4"	21
1226	Comb. Wrench, 12 Pt. 13/16"	21
1228	Comb. Wrench, 12 Pt. 7/8"	21
1230	Comb. Wrench, 12 Pt. 15/16"	21
1232	Comb. Wrench, 12 Pt. 1"	21
1312 P	Ball Pein Hammer, 12 Ounce	24
1362	Plastic Tip Hammer, 16 Ounce	24
2302	Ignition Point File, 5"	39

NO.	DESCRIPTION	PAGE
2337	Carbon Scraper	38
5026 HPA	Spark Plug Socket	38
5210 H	Reg. Socket, 6 Pt. 5/16"	43
5212	Reg. Socket, 12 Pt. 3/8"	43
5214	Reg. Socket, 12 Pt. 7/16"	43
5216	Reg. Socket, 12 Pt. 1/2"	43
5218	Reg. Socket, 12 Pt. 9/16"	43
5219	Reg. Socket, 12 Pt. 19/32"	43
5220	Reg. Socket, 12 Pt. 5/8"	43
5222	Reg. Socket, 12 Pt. 11/16"	43
5224	Reg. Socket, 12 Pt. 3/4"	43
5226	Reg. Socket, 12 Pt. 13/16"	43
5228	Reg. Socket, 12 Pt. 7/8"	43
5249	Ratchet, 3/8" Square Drive	44
5260	Extension Bar, 3 1/2"	43
5261	Extension Bar, 7 1/2"	43
5262	Extension Bar, 12"	43
5265	Hinge Handle	43
5270	Universal Joint	43
5280	Speed Handle	43
5285	Sliding Bar	43
5414	Reg. Socket, 12 Pt. 7/16"	44
5416	Reg. Socket, 12 Pt. 1/2"	44
5418	Reg. Socket, 12 Pt. 9/16"	44
5419	Reg. Socket, 12 Pt. 19/32"	44
5420	Reg. Socket, 12 Pt. 5/8"	44
5422	Reg. Socket, 12 Pt. 11/16"	44
5424	Reg. Socket, 12 Pt. 3/4"	44
5425	Reg. Socket, 12 Pt. 25/32"	44
5426	Reg. Socket, 12 Pt. 13/16"	44
5428	Reg. Socket, 12 Pt. 7/8"	44
5430	Reg. Socket, 12 Pt. 15/16"	44

NO.	DESCRIPTION	PAGE
5432	Reg. Socket, 12 Pt. 1"	44
5434	Reg. Socket, 12 Pt. 1 1/16"	44
5436	Reg. Socket, 12 Pt. 1 1/8"	44
5438	Reg. Socket, 12 Pt. 1 3/16"	44
5440	Reg. Socket, 12 Pt. 1 1/4"	44
5447	Ratchet Adaptor	43
5449	Ratchet, 1/2" Square Drive	44
5460	Extension Bar, 2 1/2"	45
5461	Extension Bar, 5"	45
5463	Extension Bar, 10"	45
5468	Hinge Handle	45
5480	Speed Handle	45
5485	Sliding Handle	44
8160	Box Wrench, 12 Pt. 3/8" x 7/16"	23
8161	Box Wrench, 12 Pt. 1/2" x 9/16"	23
8162	Box Wrench, 12 Pt. 5/8" x 11/16"	23
8163	Box Wrench, 12 Pt. 3/4" x 13/16"	23
9604	Screwdriver, 1/4" x 4"	58
9608	Screwdriver, 3/8" x 8"	58
9652	Screwdriver, 1/4" x 1 1/2"	59
9682	Phillips Screwdriver, #1	59
9684	Phillips Screwdriver, #2	59
9686	Phillips Screwdriver, #3	59
9688	Phillips Screwdriver, #4	59
9975	Metal Chest	69

Set No. 9912, Tools and Chest. Wt. 42.47 Lbs.

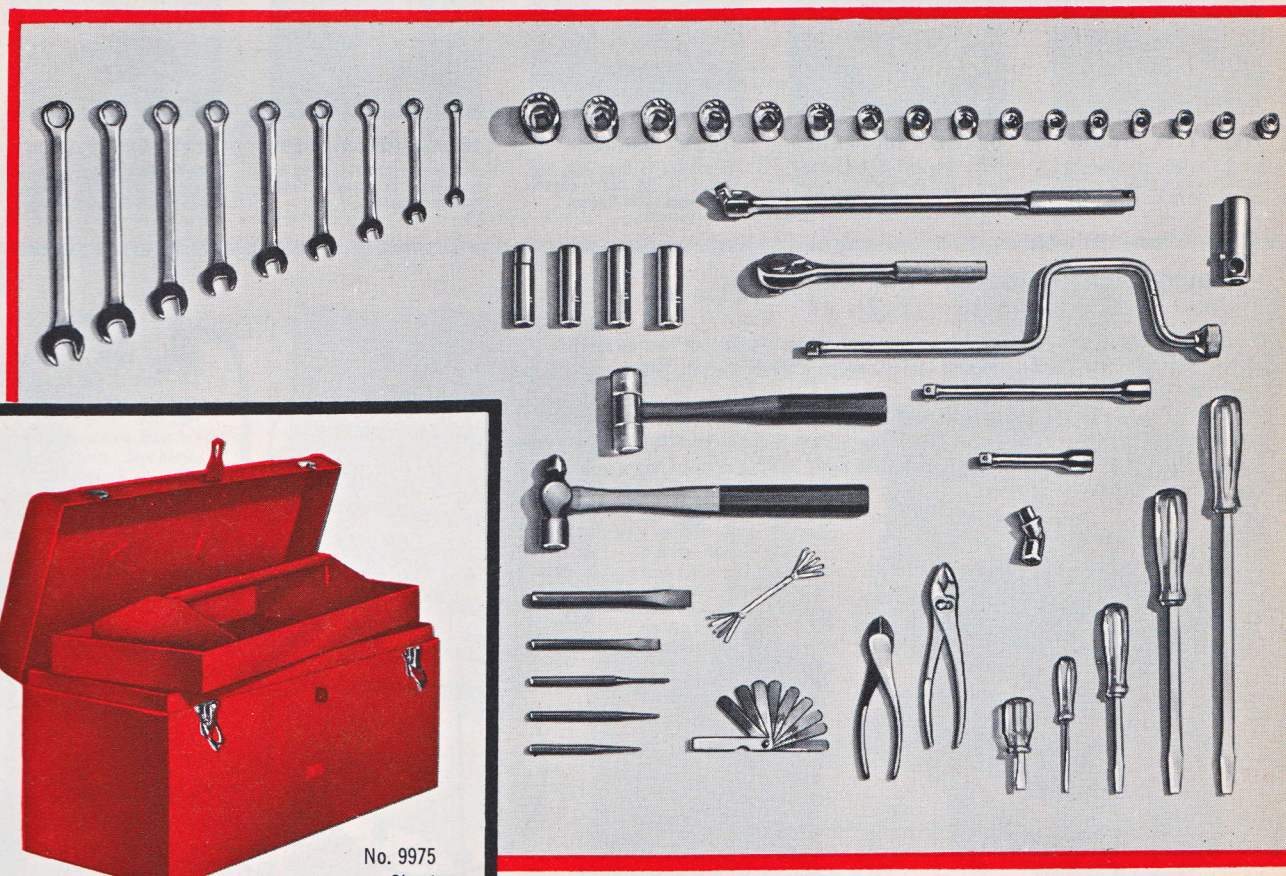
SET NO. 9911

Tools in Set 9912 Minus Chest No. 9975, Weight 31.47 Lbs.

NO. 9914 APPRENTICE TOOL SET

(SET NO. 9913 SEE BOTTOM OF PAGE)

Here are 52 basic tools that enable you to do most service work efficiently, with a low initial investment in fine quality PROTO tools.
Additional tools can be added until you have a complete mechanic's set.



No. 9975
Chest

NO.	DESCRIPTION	PAGE
000 A	Feeler Gauge Set	2
000 D	Ignition Gauge Set	2
41 3/8	Center Punch, 3/8" x 4 29/32"	5
47 3/8 x 3/16	Pin Punch, 3/16" x 6 1/8"	5
50 3/8	Starting Punch, 3/16" x 5 21/32"	5
86 A 3/8	Cold Chisel, 7/16" x 5 5/8"	5
86 A 5/8	Cold Chisel, 3/4" x 7 3/16"	5
209	Diagonal Cutting Plier, 7"	6
278	Slip Joint Plier, 8"	10
1212	Comb. Wrench, 12 Pt. 3/8"	21
1214	Comb. Wrench, 12 Pt. 7/16"	21
1216	Comb. Wrench, 12 Pt. 1/2"	21
1218	Comb. Wrench, 12 Pt. 9/16"	21
1220	Comb. Wrench, 12 Pt. 5/8"	21
1222	Comb. Wrench, 12 Pt. 11/16"	21
1224	Comb. Wrench, 12 Pt. 3/4"	21
1226	Comb. Wrench, 12 Pt. 13/16"	21
1228	Comb. Wrench, 12 Pt. 7/8"	21
1316 P	Ball Pein Hammer, 16 Ounce	24
1383	Plastic Tip Hammer, 12 Ounce	24

NO.	DESCRIPTION	PAGE
4515	Stud Remover	35
5320	Deep Socket, 12 Pt. 5/8"	44
5322	Deep Socket, 12 Pt. 11/16"	44
5324	Deep Socket, 12 Pt. 3/4"	44
5326	Deep Socket, 12 Pt. 13/16"	44
5412	Reg. Socket, 12 Pt. 3/8"	44
5414	Reg. Socket, 12 Pt. 7/16"	44
5416	Reg. Socket, 12 Pt. 1/2"	44
5418	Reg. Socket, 12 Pt. 9/16"	44
5419	Reg. Socket, 12 Pt. 19/32"	44
5420	Reg. Socket, 12 Pt. 5/8"	44
5422	Reg. Socket, 12 Pt. 11/16"	44
5424	Reg. Socket, 12 Pt. 3/4"	44
5425	Reg. Socket, 12 Pt. 25/32"	44
5426	Reg. Socket, 12 Pt. 13/16"	44
5428	Reg. Socket, 12 Pt. 7/8"	44
5430	Reg. Socket, 12 Pt. 15/16"	44
5432	Reg. Socket, 12 Pt. 1"	44
5434	Reg. Socket, 12 Pt. 1 1/16"	44
5436	Reg. Socket, 12 Pt. 1 1/8"	44

NO.	DESCRIPTION	PAGE
5440	Reg. Socket, 12 Pt. 1 1/4"	44
5449	Ratchet	44
5461	Extension Bar, 5"	45
5463	Extension Bar, 10"	45
5468	Hinge Handle	45
5470	Universal Joint	45
5480	Speed Handle	45
9623	Screwdriver, 1/8" x 3"	58
9652	Screwdriver, 1/4" x 1 1/2"	59
9804	Screwdriver, 1/4" x 4"	58
9808	Screwdriver, 3/8" x 8"	58
9812	Screwdriver, 3/8" x 12"	58
9975	Metal Chest	69

Set No. 9914, Tools and Chest Wt. 31.30 Lbs.

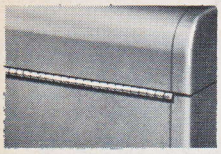
SET NO. 9913

Tools in Set 9914 Minus Chest No. 9975, Wt. 20.30 Lbs.

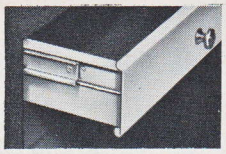
STEEL TOOL BOXES, CHESTS AND CABINETS

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

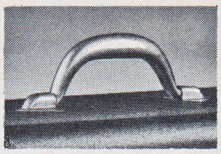
PROTO boxes, chests and kits are designed with a practical on-the-job knowledge of the needs of the professional tool users. Heavy gauge steel, electrical welding, reinforced construction make them rugged, rigid and long lasting. There are models for every type of work, with drawers and trays partitioned to help you find the right tool without wasting time. Baked red finish is durable and good looking.



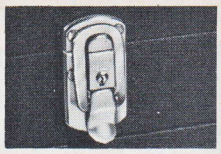
PIANO TYPE HINGES
are full length, electronically welded, assure great strength, proper fitting doors and lids.



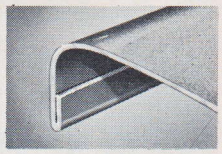
DRAWERS PULL EASILY
when heavily loaded. They can't spill. Compound runners welded to chest for rigidity.



STRONG HANDLES
are shaped to the hand, big enough to lift heavy chests without pinching fingers.



LOCKS AND CATCHES
are heavy, nickel plated or enameled, accurately fitted, riveted securely.



HEAVY GAUGE STEEL
with double rolled or hemmed edges, electrically welded, make PROTO chests rugged.

"TOOLMOBILE"® MOBILE TOOL CABINETS

FEATURING INTERCHANGEABLE DRAWERS

You'll be mighty proud when you own a gleaming, sturdy "Toolmobile"—true mark of a professional tool user. Saving hours by taking needed tools on the job, and preventing tool losses, a "Toolmobile" soon pays for itself.

Biggest feature is the interchangeability of drawers, which makes every "Toolmobile" a custom-built cabinet for its owner. Easy-to-move drawer runners, that fit into notches spaced every 2″ from top to bottom, permit any of three basic sizes of drawers to be arranged in many combinations.

9968

9968-B

9968-A

Big rubber casters roll easily over electric cords, uneven floors.

INDIVIDUAL "TOOLMOBILE" PARTS

CABINET AND PART NUMBERS	DESCRIPTION	PARTS IN NO. 9968 ASSEMBLY WEIGHT 112 LBS.	PARTS IN NO. 9968A ASSEMBLY WEIGHT 133 LBS.	PARTS IN NO. 9968B ASSEMBLY WEIGHT 159 LBS.
	Basic Cabinet with 17 5/8″ x 27 5/8″ Masonite top, drop front, lock, two keys, four casters and two handles. Overall dimensions 31 7/8″ (incl. handles) x 18″ x 37″ high (incl. casters)	1	1	1
9968-1*	Shallow Drawer and Runners 21 15/16″ x 16 1/8″ x 1 3/32″ deep (inside) Wt. 9.5 Lbs. Has perforated sections which can be punched out to form holes for drawer divider bolts	1	1	2
9968-2*	Medium Drawer and Runners 21 15/16″x16 1/8″x 2 3/4″ deep (Inside) Wt. 11.5 Lbs. Has "punch out" bolt holes and reinforced bottom	1	1	2
9968-3*	Deep Drawer and Runners 21 15/16″ x 16 1/8″ x 4 3/4″ deep (Inside) Wt. 13.5 Lbs. Has "punch out" bolt holes and reinforced bottom		1	2
9968-4*	Drawer Divider Set, Wt. 1.6 Lbs. Has two slotted sides and four partitions which form various compartments	1	1	2
9968-5*	Complete Light Assembly, Wt. 4.4 Lbs., with flexible gooseneck that reaches over front for lighting drawers, two outlets and 8 Ft. cord		1	1
9968-6*	Door for Bottom section, Wt. 5.25 Lbs.		1	

* May be ordered separately.

MORE BIG "TOOLMOBILE" FEATURES

- Ruggedly constructed of heavy-gauge welded steel. Critical points strongly reinforced. Round corners, extra heavy channels across bottom, double side walls, hemmed drawer edges and midfront stiffener assure rigidity and proper drawer alignment.
- Drawers have outside depths of 2″, 4″ and 6″ to permit various arrangements in the 2″-spaced drawer runner notches. Bottom compartment is 12″ deep, which allows also for interchanging drawers.
- Four-roller drawers move at finger's touch. Double-supported roller axles take heavy load.
- Semi-soft, tough rubber, 5″ casters on husky ball-bearing swivel plates—each held by four bolts—roll easily and quietly, and reduce tool jarring.
- Two casters have handy foot-operated brakes.
- Single-lock front closes entire cabinet. Folds and slides out of way under top when unlocked.
- Rail around three sides of top keeps tools from rolling off and holds socket wrench racks.
- Two 15″ handles make cabinet easy to maneuver.
- Finish is lustrous red, with smart chrome trim.

ALL-PURPOSE TOOL CHESTS

NO. 9980 UTILITY TOOL CHEST

This low priced, high quality chest is ideal for tool users who want maximum space with minimum weight. Top fixed tray has two compartments. Large bottom space has one partition. Strong hasp on lid fits over staple on drop-front for locking.

DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	22 1/4"	9"	6 9/16"	10
Top Fixed Tray	21 7/8"	4"	1 13/16"	
Bottom Compartment	21 7/8"	8 9/16"	6 1/2"	

NO. 9989 SERVICE TOOL CHEST

Big and rugged, this chest has space for carrying plenty of tools to just about any job. Deluxe features include a 2-compartment hinged tray which swings up with the lid, removable tote tray with 2 compartments and full length handle, large lower compartment divided by a partition, 3 full length piano type hinges. Front plate hinged to lid folds back when open, drops to engage hasp and staple for locking.

DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	20 9/16"	12"	9"	19
Hinged Tray	19 5/8"	6"	1 5/8"	
Fixed Top Tray	20 1/2"	4 7/8"	1 1/2"	
Tote Tray	19 5/8"	6"	1 5/8"	
Bottom space	20 1/2"	11 7/8"	4 7/8"	

NO. 9990 MECHANICS TOOL CHEST

Fits top of Toolmobile.

Designed for midget and large tools, this versatile chest is popular with mechanics requiring tools for all types of work. Five drawers: three small, one medium, one large with two compartments. Hinged tray with three compartments swings up with lid. Fixed tray is at back of top area. Roomy inside space has section for large heavy-duty sockets. Hinged lid section overlaps drop-front, with rugged hasp and staple for secure locking.

DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	24 1/2"	12"	13"	37
2 Left small drawers	4 13/32"	11"	1"	
1 Right small drawer	3 1/2"	11"	2 1/8"	
1 Center medium drawer	10 3/4"	11"	2 1/8"	
1 Large bottom drawer	19 7/8"	11"	2 1/8"	
1 Hinged tray	23 3/8"	6"	1 5/8"	
1 Fixed Tray	24 7/16"	3 1/4"	1 1/4"	
Large inside space	24 7/16"	11 3/4"	5 13/16"	

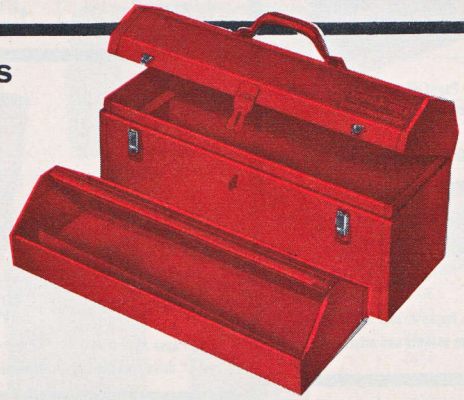
NO. 9997 MASTER TOOL CHEST

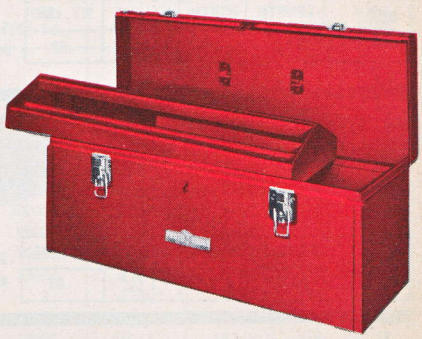
Fits top of Toolmobile.

This top quality chest has everything professional mechanics require for proper storing of master sets of tools and carrying of selected tools to their work. It is roomy, rugged, efficient, good looking. Top section is divided into 3 compartments, one holding a removable tote tray with 2 socket compartments, big tool space and rigid non-tilt handle. 6 easy-roll, no-spill drawers: 3 small ones for precision tools, 1 full width shallow drawer with 2 compartments, 1 medium depth with 3 compartments, 1 deep drawer with 2 compartments, all partitions sturdily welded. Lid overlaps chest with snug fit. Front cover plate is hinged to swing back inside lid when chest is open, cover the drawers when closed. Strong tumbler lock secures the chest.

DIMENSIONS	LENGTH	WIDTH	HEIGHT	WT., LBS.
Chest Overall	26"	12"	14 3/8"	65
Tote Tray	20 3/4"	8 1/8"	1 9/16"	
3 Drawers, each	7 1/4"	10 3/16"	1"	
1 Drawer	23 3/4"	10 3/16"	1"	
1 Drawer	23 3/4"	10 3/16"	1 5/8"	
1 Drawer	23 3/4"	10 3/16"	3 1/4"	

ALL PURPOSE TOOL BOXES





NO. 100 HR HIP ROOF TOOL BOX

Popular heavy gauge steel box easily holding socket sets up to 3/4" drive. Removable tote tray has 13 1/2" socket compartment and full length 2" compartment. 2-piece lid has full length piano hinges. Handles hold box shut while carrying. Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	21 3/16"	8 7/16"	7 1/8"	11.9

NOS. 9970 & 9971 HIP ROOF TOOL BOXES

Hold amazing number of tools. Heavy gauge steel box. 1-piece lid with full length piano hinges overlaps top. 2 lever-type fasteners, hinge hasp, comfortable grip handle. Tote tray lifts out. Durable red finish. Two sizes.

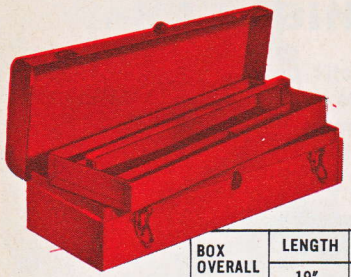
BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
No. 9970	19 9/16"	5 7/8"	5 7/8"	7.7
No. 9971	19	7 1/32"	9 1/8"	10.4

NO. 9972 & 9975 TOOL BOX

Popular with many types of tool users. Removable tote tray has 3 compartments, big space underneath. Heavy gauge steel. Lid has full length piano hinge, 2 lever-type fasteners, padlock hasp. Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
No. 9972	23 1/32"	8 1/2"	9 1/2"	13.6
No. 9975	20 1/32"	8 1/2"	9 1/2"	11.

ALL PURPOSE TOOL BOXES [CONT.]

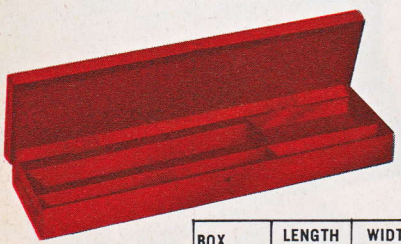


NO. 5296
Heavy gauge steel. Has tote tray with 9 compartments for smaller items. Full length piano hinge. Hasp for padlock. Sturdy metal grip. Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	19″	7″	4¾″	9.

NO. 9991 HEAVY DUTY TOOL CHEST
Designed for master sets, and to fit on Toolmobile, this big chest has tote tray, compartmented top section, compartmented top drawer, extra large bottom drawer. Reinforced cover has 2 piano hinges, drop-front panel enclosing drawers, cabinet-type lock, keys. Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	26″	12″	11 11/16″	34.



NO. 4796
For ¼″ drive sockets. Has 5 compartments for regular and deep sockets, plus attachments.
Resistance welded heavy gauge steel.
Durable red finish.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	12″	3 ½″	1 ⅛″	1.16

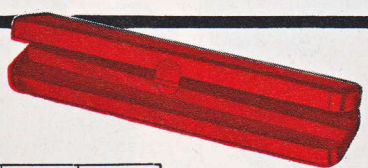
STEEL TOOL BOXES

SOCKET SET BOXES

NO. 4795 MIDGET TOOL BOX
Made for ¼″ drive midget sockets, handles and attachments. Keeps smaller tools in order with separate compartment for sockets.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	6 ¾″	3″	1 ¼″	.52

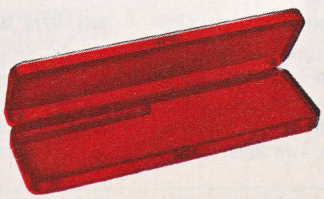
See Pages 40 and 41 for 1/4″ drive sockets and attachments.



NO. 5294 JUNIOR CUB TOOL BOX
Holds large number of ⅜″ drive cub sockets and several attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	10 ¼″	2 ¼″	1 ¼″	.83

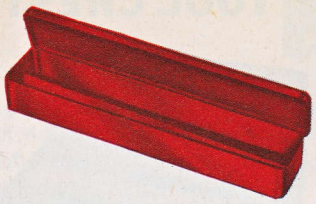
See Pages 42 and 43 for 3/8″ drive sockets and attachments.



NO. 5295 CUB TOOL BOX
Made for ⅜″ drive cub sockets, handles and attachments. Die-formed, one piece construction for added strength. Has end reinforcing flanges, rounded corners and a spring hasp.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	17 ½″	5 ¼″	2″	1.70

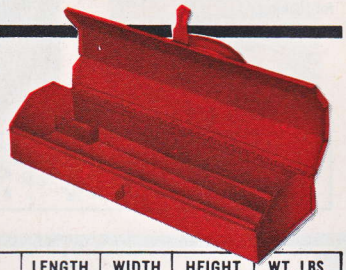
See Pages 42 and 43 for 3/8″ drive sockets and attachments.



NO. 5494 JUNIOR STANDARD TOOL BOX
Holds large number of ½″ drive standard sockets, plus several handles and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	16 ¼″	3″	2″	1.86

See Pages 44 and 45 for 1/2″ drive sockets and attachments.



NO. 5496 HIP ROOF TOOL BOX
Smaller hip roof box with ample room for long handled tools. Two compartments for smaller tools. Full-length piano hinge attaches cover to box. Metal carrying handle; two snap catches; center hasp for padlock. 22 gauge steel. Durable red finish. Individually boxed.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	18 ½″	5 ¾″	3 ⅝″	3.25

See Pages 44 and 45 for 1/2″ drive sockets and attachments.

NO. 5695 HEAVY-DUTY TOOL BOX
Made for ¾″ heavy-duty sockets, handles and attachments. Construction throughout is extra heavy. Has five convenient compartments. Cover is held shut by two spring catches and a padlock hasp. Handle folds out of way when not in use.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	22 ½″	8″	3 ¾″	9.0

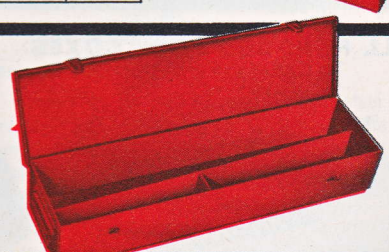
See Pages 46 and 47 for 3/4″ drive sockets and attachments.

NO. 5696 HEAVY-DUTY TOOL BOX
Will hold full ¾″ socket line and attachments.

BOX OVERALL

LENGTH	WIDTH	HEIGHT	WT. LBS.
23 3/16″	9″	4″	19.5

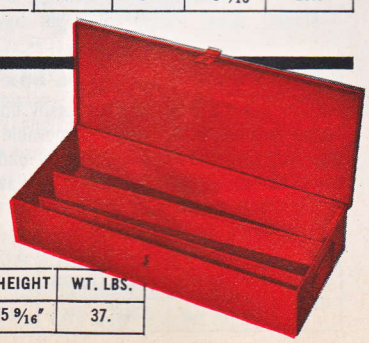
See Pages 46 and 47 for 3/4″ drive sockets and attachments.



NO. 5894 EXTRA HEAVY-DUTY TOOL BOX
Made for 1″ square drive extra heavy-duty and ¾″ drive heavy-duty sockets, handles and attachments. Made of heavy gauge throughout—welded, riveted and strongly reinforced.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	30″	5″	8 3/16″	13.6

See Pages 48 and 49 for 1″ drive sockets and attachments.



NO. 5895 EXTRA HEAVY-DUTY TOOL BOX
Will hold full 1″ socket line and attachments.

See Pages 48 and 49 for 1″ drive sockets and attachments.

BOX OVERALL	LENGTH	WIDTH	HEIGHT	WT. LBS.
	30 3/8″	12 9/16″	5 9/16″	37.

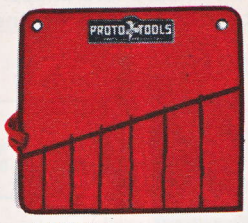
KITS FOR TOOL SETS

Finest obtainable for storing and carrying tools. Vinyl plastic impregnation offers many advantages. It is noted for long wear, is flexible, won't crack or peel, is scratch and scuff proof, resists grease and oil, and is easy to clean with soap and water. The kits are red, with blue trim. They have strongly stitched seams, heavy tie strings, two grommets for hanging, and tough, crystal clear vinyl plastic pocket covers.

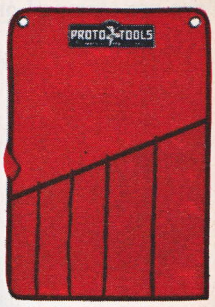
2402

2403

2404



2404 M



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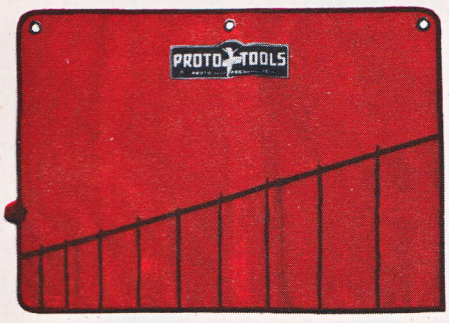

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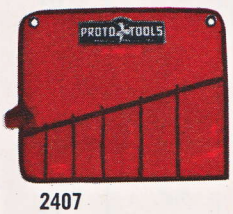

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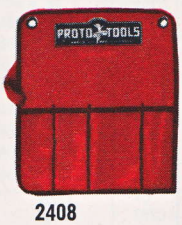

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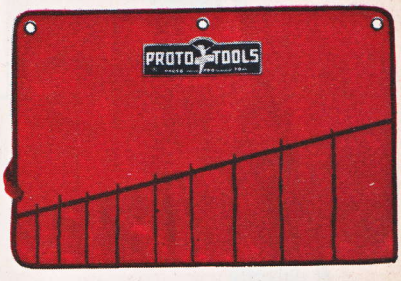

2414

2409

2410

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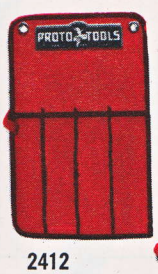

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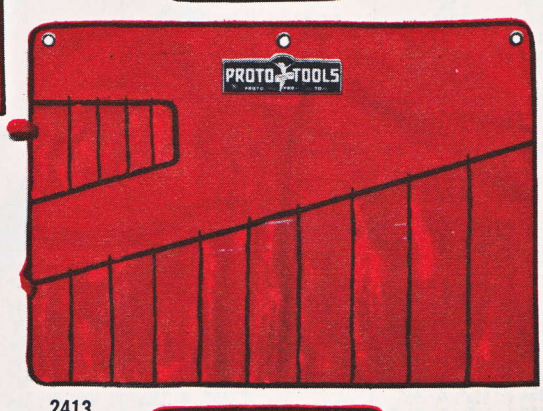

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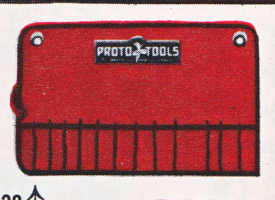
2418

2415



2420

2416

2419

2417

2424

2425

2426

2421

DESCRIPTION OF KITS

NO.	FOR SET NO.	WIDTH	DEPTH	POCKETS	WT., LBS.
2402	2	12 7/8"	7 1/2"	12	.09
2403	47A	7 3/8"	8 1/4"	7	.07
2404	1200H	11 3/8"	10 1/2"	7	.14
2404F	3700A	11 3/8"	10 1/2"	7	.14
2404M	1200M	11 3/8"	10 1/2"	7	.14
2405	1100K	10"	15"	5	.17
2406	3000H	21 1/4"	15 1/2"	10	.35
2407	30000R	10 1/4"	8 3/4"	6	.10
2408	9900D	8 1/2"	9 1/4"	4	.10
2409	3000N	9 1/2"	11 3/4"	5	.12
2410	3300A	9 3/8"	5 3/4"	9	.06
2411	3	5 15/16"	8 1/8"	5	.04
2412	3400G	6 3/4"	11 1/2"	4	.09
2413	1200F	25"	18 1/2"	15	.58
2414	30000A	19"	13 1/8"	10	.28
2415	1200L	12 3/4"	13 1/8"	9	.18
2416	3200D	9 1/8"	5 3/4"	9	.06
2417	3200B	5 9/16"	5 3/4"	5	.04
2418	1100M	18 7/8"	18 1/2"	10	.50
2419	9200C	5 3/8"	17 5/8"	7	.12
2420	3200C	12"	8"	13	.12
2421	140A	4 1/2"	7 1/4"	1	.07
2424	9700A	8"	21 1/2"	5	.13
2425	9800A	6 3/4"	19 3/4"	5	.19
2426	9600A	6"	15 1/2"	5	.13

DROP FORGED ENGINEERS' WRENCHES

(CARBON STEEL)

PROTO TOOLS — PROFESSIONAL QUALITY TOOLS

15° ANGLE — FOR STANDARD NUTS AND CAP SCREWS

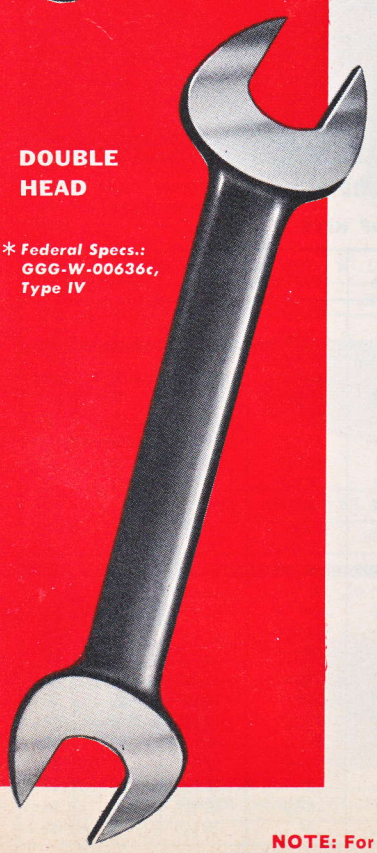
Drop forged from high grade carbon steel, processed by improved methods. Openings are broached or milled to standard tolerances. Edges and surfaces are smooth. Sizes are stamped on polished heads. Hardened. Baked black enamel finish.

SINGLE HEAD

Federal Specs.: GGG-W-00636c, Type V

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. HEX. HEAD CAP SCREW; DIAM. SCREW	AMER. STD. LIGHT NUT (S.A.E.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	APPROX. WEIGHT EACH LBS
C700	3/8"	....	3/16"	....	■10"	4"	.09
C701	7/16"	....	1/4"	1/4"	1/4" & ■12"	4 5/8"	.13
C1	1/2"	1/4"	5/16"	5/16"	....	4 5/8"	.13
C702	9/16"	....	3/8"	3/8"	5/16"	5 1/2"	.21
C2	19/32"	5/16"	....	....	....	5 1/2"	.21
C703	5/8"	....	7/16"	7/16"	3/8"	6 3/8"	.30
C3	11/16"	3/8"	....	....	....	6 3/8"	.30
C704	3/4"	....	1/2"	1/2"	7/16"	7 1/4"	.38
C705	13/16"	....	9/16"	....	1/2"	8 1/8"	.60
C5	7/8"	1/2"	5/8"	9/16"	9/16"	8 1/8"	.60
C6A	15/16"	....	....	5/8"	....	9 1/4"	.95
C6	31/32"	9/16"	....	....	....	9 1/4"	.95
C706	1"	....	3/4"	11/16"	5/8"	9 1/4"	.95
C7	1 1/16"	5/8"	....	3/4"	....	10 1/2"	1.30
C707	1 1/8"	....	7/8"	....	3/4"	10 1/2"	1.30
C8	1 1/4"	3/4"	1"	7/8"	....	12"	2.1
C8A	1 5/16"	....	....	....	7/8"	12"	2.1
C708A	1 3/8"	....	1 1/8"	....	....	12"	2.1
C9	1 7/16"	7/8"	....	1"	....	13 1/2"	2.5
C709	1 1/2"	....	1 1/4"	....	1"	13 1/2"	2.5
C10	1 5/8"	1"	1 3/8"	1 1/8"	....	15"	3.7
C11	1 13/16"	1 1/8"	....	1 1/4"	....	16 1/2"	4.3
C11A	1 7/8"	....	....	....	1 1/4"	16 1/2"	4.3
C12	2"	1 1/4"	....	1 3/8"	....	18 1/4"	6.3
C13	2 3/16"	1 3/8"	....	1 1/2"	....	20"	7.6
C13A	2 1/4"	....	....	....	1 1/2"	20"	7.6
C14	2 3/8"	1 1/2"	....	....	....	22"	9.9
C14A	2 7/16"	....	....	....	1 5/8"	22"	9.9
C15	2 9/16"	1 5/8"	....	....	....	24"	11.5
C15A	2 5/8"	....	....	....	1 3/4"	24"	11.5
C16	2 3/4"	1 3/4"	....	....	....	27"	14.5
C16B	2 13/16"	....	....	....	1 7/8"	27"	14.5

■ Amer. Std. Machine Screw and Stove Bolt Nuts.



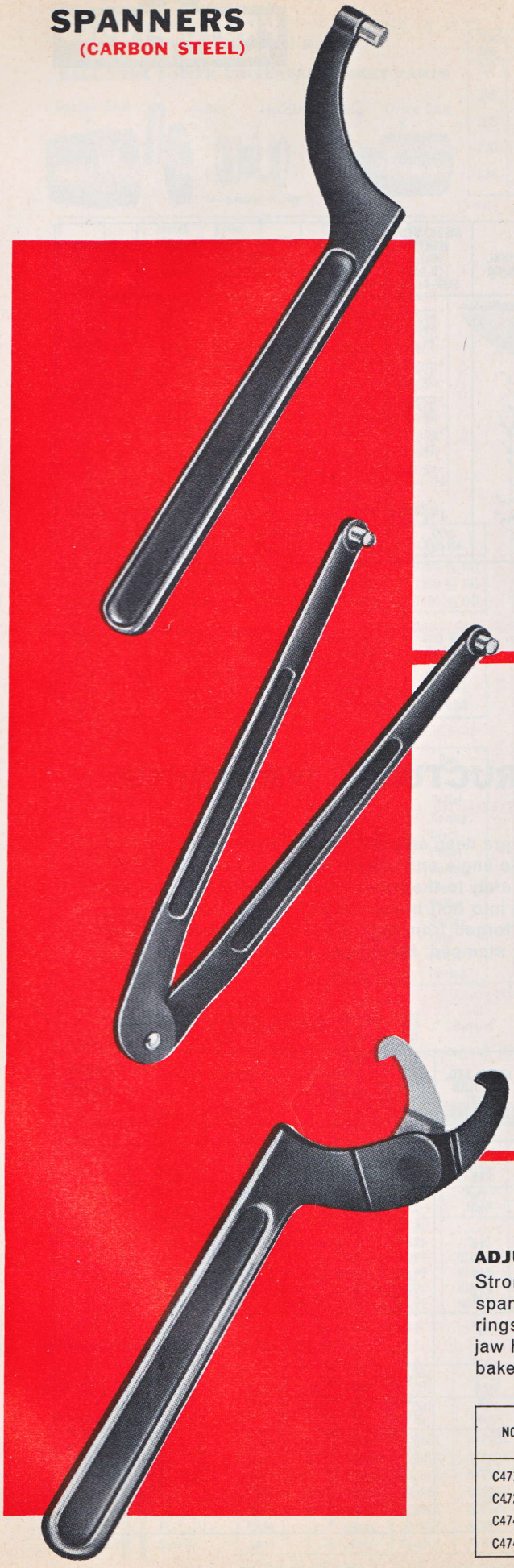
DOUBLE HEAD

** Federal Specs.: GGG-W-00636c, Type IV*

*C721	5/16" & 3/8"	1/8" ...	1/8" & 3/16"	... ...	... ...	4"	.08
* C21	5/16" & 13/32"	1/8" & 3/16"	1/8" ...	... ...	... ...	4"	.08
C722	5/16" & 7/16"	1/8" ...	1/8" & 1/4"	... 1/4"	... 1/4"	4 5/8"	.13
C22	5/16" & 1/2"	1/8" & 1/4"	... 5/16"	... 5/16"	... ...	4 5/8"	.13
C723	3/8" & 7/16"	... ...	3/16" & 1/4"	... 1/4"	... 1/4"	4 5/8"	.13
*C723A	3/8" & 1/2"	... 1/4"	3/16" & 5/16"	... 5/16"	... ...	4 5/8"	.13
C725	7/16" & 1/2"	... 1/4"	1/4" & 5/16"	1/4" & 5/16"	1/4" ...	5 1/2*	.19
C725A	7/16" & 9/16"	... ...	1/4" & 3/8"	1/4" & 3/8"	1/4" & 5/16"	5 1/2	.19
C 25A	7/16" & 5/8"	... ...	1/4" & 7/16"	1/4" & 7/16"	1/4" & 3/8"	5 1/2"	.19
*C725B	1/2" & 9/16"	1/4" ...	5/16" & 3/8"	5/16" & 3/8"	... 5/16"	5 1/2"	.19
C726	1/2" & 5/8"	1/4" ...	5/16" & 7/16"	5/16" & 7/16"	... 3/8"	6 1/2"	.28
C26	1/2" & 11/16"	1/4" & 3/8"	5/16" ...	5/16" ...	... ...	6 1/2"	.28
C727	9/16" & 5/8"	... ...	3/8" & 7/16"	3/8" & 7/16"	5/16" & 3/8"	6 1/2"	.28
27C	9/16" & 11/16"	... 3/8"	3/8" ...	3/8" ...	5/16" ...	6 1/2"	.28
C728	9/16" & 3/4"	... ...	3/8" & 1/2"	3/8" & 1/2"	5/16" & 7/16"	7 1/2"	.39
C28S	5/8" & 25/32"	... 7/16"	7/16" ...	7/16" ...	3/8" ...	7 1/2"	.39
C729	5/8" & 3/4"	... ...	7/16" & 1/2"	7/16" & 1/2"	3/8" & 7/16"	7 1/2"	.39
* C29B	11/16" & 3/4"	3/8" ...	... 1/2"	... 1/2"	7/16" ...	7 1/2"	.39
C30	11/16" & 7/8"	3/8" & 1/2"	... 5/8"	... 9/16"	... 9/16"	8 1/2"	.55
C731	3/4" & 13/16"	... ...	1/2" & 9/16"	1/2" ...	7/16" & .1/2"	8 1/2"	.55
C731A	3/4" & 7/8"	... 1/2"	1/2" & 5/8"	1/2" & 9/16"	7/16" & 9/16"	8 1/2"	.55
C31	25/32" & 7/8"	7/16" & 1/2"	... 5/8"	... 9/16"	... 9/16"	8 1/2"	.55
C731B	13/16" & 7/8"	... 1/2"	9/16" & 5/8"	... 9/16"	1/2" & 9/16"	8 1/2"	.55
C33A	7/8" & 15/16"	1/2" ...	5/8" ...	9/16" & 5/8"	9/16" ...	9 1/2"	.84
C733	7/8" & 1"	1/2" ...	5/8" & 3/4"	9/16" ...	9/16" & 5/8"	9 1/2"	.84
C33C	15/16" & 1"	... ...	... 3/4"	5/8" ...	... 5/8"	9 1/2"	.84
C34	7/8" & 1 1/16"	1/2" & 5/8"	5/8" ...	9/16" & 3/4"	9/16" ...	10 3/4"	1.2
C735	1" & 1 1/8"	... ...	3/4" & 7/8"	... ...	5/8" & 3/4"	10 3/4"	1.2
C37	1 1/16" & 1 1/4"	5/8" & 3/4"	... ...	3/4" & 7/8"	... ...	12"	1.5
C737	1 1/8" & 1 1/4"	... 3/4"	7/8" ...	... 7/8"	3/4" ...	12"	1.5
C37A	1 1/8" & 1 5/16"	... ...	7/8" & 1	... ...	3/4" & 7/8"	12"	1.5
C39	1 1/4" & 1 7/16"	3/4 & 7/8"	... ...	7/8" & 1"	... ...	13 1/2"	2.3
C40	1 1/4" & 1 5/8"	3/4" & 1"	... ...	7/8" & 1 1/8"	... ...	15 3/4"	3.5
C41	1 7/16" & 1 5/8"	7/8" & 1"	... ...	1" & 1 1/8"	... ...	15 3/4"	3.5
* C42	1 7/16" & 1 13/16"	7/8" & 1 1/8"	... ...	1" & 1 1/4"	... ...	17"	5.3
C42A	1 1/2" & 1 11/16"	... ...	1 1/8" & 1 1/4"	... ...	1" & 1 1/8"	17"	5.3
* C43	1 5/8" & 1 3/16"	1" & 1 1/8"	... ...	1 1/8" & 1 1/4"	... ...	17"	5.3
C44	1 5/8" & 2"	1" & 1 1/4"	... ...	1 1/8" & 1 3/8"	... ...	19"	7.5
* C44A	1 11/16" & 1 7/8"	... ...	1 1/4" ...	... ...	1 1/8" & 1 1/4"	19"	7.5
* C45	1 13/16" & 2"	1 1/8" & 1 1/4"	... ...	1 1/4" & 1 3/8"	... ...	19"	7.5

NOTE: For standard nut and bolt sizes corresponding to nominal wrench openings see chart on page 76.

SPANNERS
(CARBON STEEL)



Federal Specs.:
GGG-W-665, Type II
Grade A

PIN SPANNER

Single milled pin fits into notches of round nuts. Pin and wrench are drop forged together from high grade carbon steel. Smooth surfaces. Hardened. Baked black enamel finish.

NO.	FOR CIRCLE; DIAMETER	EXTREME LENGTH APPROX.	FINISHED DIAMETER PIN	APPROX. WEIGHT EACH LBS.
C452	1″	4″	3/16″	.08
C453	1 1/4″	4 1/2″	13/64″	.10
C454	1 1/2″	5″	7/32″	.14
C455	1 3/4″	5 1/2″	15/64″	.16
C456	2″	6″	1/4″	.21
C457	2 1/4″	6 1/2″	17/64″	.27
C458	2 1/2″	7″	9/32″	.31
C459	2 3/4″	7 1/2″	19/64″	.35
C460	3″	8″	5/16″	.48
C461	3 1/4″	8 1/2″	21/64″	.51
C462	3 1/2″	9″	11/32″	.56
C463	3 3/4″	9 1/2″	23/64″	.66
C464	4″	10″	3/8″	.76
C466	5″	12″	7/16″	1.3
C468	6″	14″	1/2″	1.9

Federal Specs.:
GGG-W-665, Type III, Class 1

ADJUSTABLE FACE SPANNER

A valuable tool for operations where the number of center dimensions vary. Pins and wrench are drop forged together from high grade steel. Milled pins. Smooth surfaces. Hardened. Baked black enamel finish.

NO.	EXTREME CAPACITY	EXTREME LENGTH APPROX.	DIAMETER OF PINS	WEIGHT EACH LBS.
C482	2″	6 3/8″	3/16″	.33
C483	3″	8 1/4″	1/4″	.59
C484	4″	10 3/8″	5/16″	1.1

Federal Specs.:
GGG-W-665, Type I, Class 1

ADJUSTABLE HOOK SPANNER

Strong and easily adjusted to many sizes, this is an ideal spanner on spindle bearings or for adjusting collars and slotted rings on automatic machinery. Jaw and bar are drop forged, jaw hardened and tempered. Smooth surfaces, baked black enamel finish.

NO.	CAPACITY FOR CIRCLES, DIAMETER	APPROX. LENGTH	THICKNESS		DEPTH HOOK	WEIGHT EACH LBS.
			HANDLE	HOOK		
C471	3/4″ to 2″	6 3/8″	1/4″	11/32″	1/8″	.28
C472	1 1/4″ to 3″	8 1/8″	9/32″	13/32″	5/32″	.52
C474	2″ to 4 3/4″	11 3/8″	5/16″	15/32″	3/16″	.95
C474A	4 1/2″ to 6 1/4″	12 1/8″	5/16″	15/32″	1/4″	1.1

CONSTRUCTION WRENCHES

(CARBON STEEL)

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

15° ANGLE

Deep opening assures strong bearing on square nuts. Long, round, tapered handle inserts easily into bolt holes when bringing them into line. Drop forged from high grade carbon steel. Milled. Sizes stamped. Hardened all over. Shot blasted.

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	THICK-NESS HEAD	APPROX. WEIGHT EACH LBS.
C205A	13/16"	....	1/2"	14 1/2"	17/32"	1.0
C205	7/8"	1/2"	9/16"	14 1/2"	17/32"	1.0
C206	31/32"	9/16"	....	14 1/2"	17/32"	1.0
C206B	1"	....	5/8"	14 1/2"	17/32"	1.0
C207	1 1/16"	5/8"	....	17"	5/8"	1.7
C207A	1 1/8"	....	3/4"	17"	5/8"	1.7
C208	1 1/4"	3/4"	....	19"	3/4"	2.6
C208A	1 5/16"	....	7/8"	19"	3/4"	2.6
C209	1 7/16"	7/8"	....	19"	3/4"	3.7
C209A	1 1/2"	....	1"	19"	3/4"	3.7
C210	1 5/8"	1"	....	25"	7/8"	5.3
C210A	1 11/16"	....	1 1/8"	25"	7/8"	5.3
C211	1 13/16"	1 1/8"	....	25"	7/8"	7.3
C211A	1 7/8"	....	1 1/4"	25"	7/8"	7.3
C212	2"	1 1/4"	....	25"	7/8"	7.3

STRUCTURAL WRENCHES

(CARBON STEEL)

Jaws are deep and narrow for secure seating on nuts. Handle angle and offset clears close obstructions with safety to the hand. Round, tapered handle inserts easily into bolt holes. Wrench is well balanced. Drop forged from high grade carbon steel. Milled. Sizes stamped. Hardened all over and shot blasted.

Federal Specs.: GGG-W-636a, Type IX, Class 1 and GGG-W-00636b

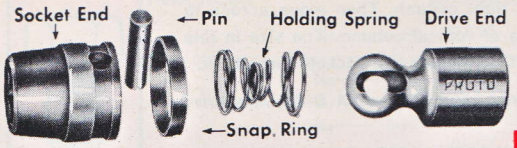
NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	THICK-NESS HEAD	HANDLE OFFSET		APPROX. WEIGHT EACH LBS.
						AT HEAD	AT END	
C901A	7/16"	....	1/4"	9 1/2"	11/32"	9/16"	1 1/2"	.33
C901	1/2"	1/4"	....	9 1/2"	11/32"	9/16"	1 1/2"	.33
C901B	9/16"	....	5/16"	9 1/2"	11/32"	9/16"	1 1/2"	.33
C902	19/32"	5/16"	....	9 1/2"	11/32"	9/16"	1 1/2"	.33
C903A	5/8"	....	3/8"	12"	7/16"	3/4"	1 11/16"	.54
C903	11/16"	3/8"	....	12"	7/16"	3/4"	1 11/16"	.54
C904A	3/4"	....	7/16"	12"	7/16"	3/4"	1 11/16"	.54
C904	25/32"	7/16"	....	12"	7/16"	3/4"	1 11/16"	.54
C905A	13/16"	....	1/2"	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C905	7/8"	1/2"	9/16"	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C906	31/32"	9/16"	....	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C906B	1"	....	5/8"	14 1/2"	17/32"	7/8"	1 7/8"	1.2
C907	1 1/16"	5/8"	....	17"	5/8"	1"	2 3/8"	1.9
C907A	1 1/8"	....	3/4"	17"	5/8"	1"	2 3/8"	1.9
C908	1 1/4"	3/4"	....	19 1/2"	3/4"	1 3/8"	2 1/2"	3.9
C908A	1 5/16"	....	7/8"	19 1/2"	3/4"	1 3/8"	2 1/2"	3.9
C909	1 7/16"	7/8"	....	19 1/2"	3/4"	1 3/8"	2 1/2"	3.9
C909A	1 1/2"	....	1"	19 1/2"	3/4"	1 3/8"	2 1/2"	3.9
C910	1 5/8"	1"	....	23"	7/8"	1 5/8"	2 3/4"	7.6
C910A	1 11/16"	....	1 1/8"	23"	7/8"	1 5/8"	2 3/4"	7.6
C911	1 13/16"	1 1/8"	....	23"	7/8"	1 5/8"	2 3/4"	7.6
C911A	1 7/8"	....	1 1/4"	23"	7/8"	1 5/8"	2 3/4"	7.6
C912	2"	1 1/4"	....	23"	7/8"	1 5/8"	2 3/4"	7.6

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 76.

PARTS

Listed numerically by tool number

BALL-TYPE POWER UNIVERSAL SOCKET PARTS



Socket No.	Drive Size	Socket End Part No.	Drive End Part No.	Pin Part No.	Holding Spring Part No.	Snap Spring Part No.
7273	3/8"	7273A	7270PF	7270PN	7270SP	7270SR
7274	3/8"	7274A	7270PF	7270PN	7270SP	7270SR
7275	3/8"	7275A	7270PF	7270PN	7270SP	7270SR
7276	3/8"	7276A	7270PF	7270PN	7270SP	7270SR
7277	3/8"	7277A	7270PF	7270PN	7270SP	7270SR
7474	1/2"	7474A	7470PF	7470PN	7470SP	7470SR
7475	1/2"	7475A	7470PF	7470PN	7470SP	7470SR
7476	1/2"	7476A	7470PF	7470PN	7470SP	7470SR
7477	1/2"	7477A	7470PF	7470PN	7470SP	7470SR
7478	1/2"	7478A	7470PF	7470PN	7470SP	7470SR
7479	1/2"	7479A	7470PF	7470PN	7470SP	7470SR

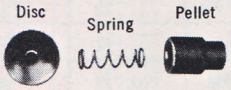
BALL-TYPE POWER UNIVERSAL JOINT PARTS

Joint No.	Drive Size	Fem. End Part No.	Male End Part'No.	Pin Part No.	Disc. Part No.
7270	3/8"	7270PF	7270PM	7270PN	7100 3/8 DD
7470	1/2"	7470PF	7470PM	7470PN	7100 1/2 DD
7670	5/8"	7670PF	7670PM	7670PN	7100 5/8 DD

Joint No.	Drive Size	Pellet Part No.	Pell. Spring Part No.	Holdg. Sprg. Part No.	Snap Ring Part No.
7270	3/8"	7100 3/8 P	7100 3/8 S	7270SP	7270SR
7470	1/2"	7100 1/2 P	7100 1/2 S	7470SP	7470SR
7670	5/8"	7100 5/8 P	7100 5/8 S	7670SP	7670SR

POWER EXTENSION SOCKET-HOLDING ATTACHMENT PARTS

Fraction in Part No. Indicates Square Drive Size.



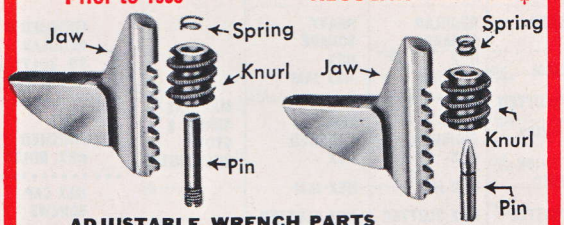
Part No.	Part
7100 1/4 DD	Disc
7100 1/4 P	Pellet
7100 1/4 S	Spring
7100 3/8 DD	Disc
7100 3/8 P	Pellet
7100 3/8 S	Spring
7100 1/2 DD	Disc
7100 1/2 P	Pellet
7100 1/2 S	Spring
7100 5/8 DD	Disc
7100 5/8 P	Pellet
7100 5/8 S	Spring

PLIER PARTS

Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Bolt & Nut No.	Plier No.	Spring No.
201	240B 240N	235	235B 235N	241	241B 240N	248S	248SB 243N	275	240B 240N	205 Series	285S-S
202	202B 240N	236	202B 240N	242	243B 243N	248P	248SB 243N	276	202B 240N	211S	285S-S
203	202B 240N	238	257B 240N	243	243B 243N	252	202B 240N	278	202B 240N	224	285S-S
230	235B 235N	239	202B 240N	245	245B 243N	257	257B 240N	280	280B 280N	250	250-S
234	234P 234N	240	240B 240N	246	257B 240N					251	250-S
										282 thru 287BS	285S-S
										396	396T

NO. 700A ADJ. WRENCH SPARE PARTS KIT

NO.	QUAN.
704J	2
704JP	2
706J	3
706JP	3
708J	3
708JP	3
710J	1
710JP	1
712J	1
712JP	1
716J	1
720J	1
704KP	1
704KPL	1
706KP	1
706KPL	1
708KP	2
708KPL	2
710KP	1
710KPL	1
712KP	1
712KPL	1
716KP	1
716KPL	1
720KP	1
720KPL	1
704N	2
704NRH	2
706N	2
706NRH	2
708N	3
708NRH	2
710N	1
710NRH	1
712N	1
712NRH	1
716N	1
716NRH	1
720N	1
720NRH	1
704R	2
706R	2
708R	3
710R	1
712R	1
716R	1
720R	1

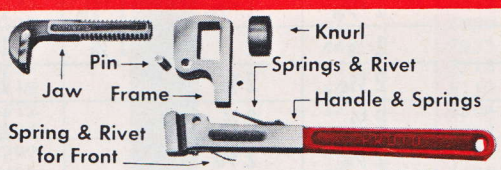


ADJUSTABLE WRENCH PARTS

Wrench No.	Polished Jaw Part No.	Plated Jaw Part No.	Plated Knurl Part No.	Threaded Pin Part No.	Spring Cylinder Part No.	Tapered Pin & Spring ‡ Part No.
704	....	704JP	704KP	704N	704R	704NRH
704L	....	704JP	704KPL	....	....	704NRH
704S	704J	....	704KP	704N	704R	704NRH
704SL	704J	....	704KPL	....	....	704NRH
706	....	706JP	706KP	706N	706R	706NRH
706L	....	706JP	706KPL	....	....	706NRH
706S	706J	....	706KP	706N	706R	706NRH
706SL	706J	....	706KPL	....	....	706NRH
708	....	708JP	708KP	708N	708R	708NRH
708L	....	708JP	708KPL	....	....	708NRH
708S	708J	....	708KP	708N	708R	708NRH
708SL	708J	....	708KPL	....	....	708NRH
710	....	710JP	710KP	710N	710R	710NRH
710L	....	710JP	710KPL	....	....	710NRH
710S	710J	....	710KP	710N	710R	710NRH
710SL	710J	....	710KPL	....	....	710NRH
712	....	712JP	712KPL	712N	712R	712NRH
712L	....	712JP	712KPL	....	....	712NRH
712S	712J	....	712KP	712N	712R	712NRH
712SL	712J	....	712KPL	....	....	712NRH
715	....	715JP	715KP	....	....	715NRH
715L	....	715JP	715KPL	....	....	715NRH
715S	715J	....	715KP	....	....	715NRH
715SL	715J	....	715KPL	....	....	715NRH
716	....	716JP	716KP	716N	716R	716NRH
716L	....	716JP	716KPL	....	....	716NRH
716S	716J	....	716KP	716N	716R	716NRH
716SL	716J	....	716KPL	....	....	716NRH
718	....	718JP	718KP	....	....	718NRH
718L	....	718JP	718KPL	....	....	718NRH
718S	718J	....	718KP	....	....	718NRH
718SL	718J	....	718KPL	....	....	718NRH
720	....	720JP	720KP	720N	720R	720NRH
720L	....	720JP	720KPL	....	....	720NRH
720S	720J	....	720KP	720N	720R	720NRH
720SL	720J	....	720KPL	....	....	720NRH

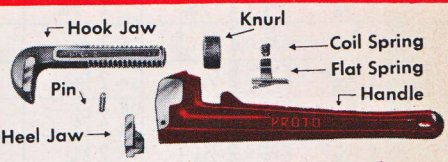
‡ For wrenches with pin hole drilled completely through head.

NORMAL-DUTY PIPE WRENCH PARTS



Wrench No.	Handle & Springs Part No.	Jaw Part No.	Knurl Part No.	Pin for Frame Part No.	Frame & Pin Part No.	Springs & Rivet for Back Part No.	Spring & Rivet for Front Part No.
806	806H	806J	806K	806P	806PF	.....	806SF
808	808H	808J	808K	808P	808PF	.....	808SF
810	810H	810J	810K	810P	810PF	810SB	810SF
814	814H	814J	814K	814P	814PF	814SB	814SF
818	818H	818J	818K	818P	818PF	818SB	818SF
824	824H	824J	824K	824P	824PF	824SB	824SF

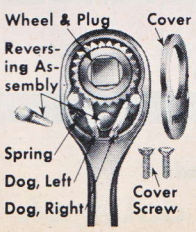
HEAVY-DUTY PIPE WRENCH PARTS



Wrench No.	Handle, Heel Jaw & Pin Assembly Part No.	Hook Jaw Part No.	Heel Jaw & Pin Part No.	Knurl Part No.	Flat Spring Part No.	Coil Spring Part No.
806HD	806A	806B	806C	806D	806E	806G
808HD	808A	808B	808C	808D	808E	808G
810HD	810A	810B	810C	810D	810E	810G
814HD	814A	814B	814C	814D	814E	814G
818HD	818A	818B	818C	818D	818E	818G
824HD	824A	824B	824C	824D	824E	824G

REVERSIBLE RATCHET PARTS

For Handy Repair Kits, see 4749RK, 5249RK, 5449RK, 5450RK, 5649RK, page 41.



Ratchet No.	Drive Size	Cover Part No.	Dog, Left Part No.	Dog, Right Part No.	Cover Screw Part No.	Reversing Assembly Part No.	Spring Part No.	Wheel w/Plug Part No.
4749	1/4"	4749C	4749DL	4749DR	4749H	4749R	4749S	4749W
5249	3/8"	5249C	5249DL	5249DR	5249H	5249R	5249S	5249W
5449	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449W
5450	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449W
5649	3/4"	5649C	5649DL	5649DR	5649H	5649R	5649S	5649W
5848	1"	5848C	5848DL	5848DR	5848H	5848R	5848S	*
5849	1"	5848C	5848DL	5848DR	5848H	5848R	5848S	*

Ratchet No. 5848 has No. 5848W Female Wheel, Ratchet No. 5849 has No. 5848W Female Wheel and No. 5852 Male Plug.

Ratchet No.	Cover Clip Part No.	Dog Part No.	Dog Ball Part No.	Dog Pin Part No.	Dog Pin Ring Part No.
4750	4750C	4750D	4750DB	4750DP	4750DPR

Drive Size	Plug Part No.	Retaining Ring Part No.	Spring Part No.	Female Wheel Part No.
1/4"	4750G	4750RR	4750S	4750W

STANDARD NUT, BOLT AND SCREW SIZING CHART

Nominal opening sizes of Proto Wrenches or Sockets in inches to fit Standard Bolt Heads, Nuts and Screw Heads

Locate thread diameter of bolt, nut or screw in extreme left or right column. Then move across to box which has proper identification of bolt, nut or screw at top of vertical column. The size in this particular box is the nominal opening size in inches of the PROTO wrenches and sockets that will fit.

American Standards Association—ASA B18.2, Appendix I

THREAD DIAMETER OF BOLT, NUT OR SCREW	NUTS				BOLTS AND SCREWS				THREAD DIAMETER OF BOLT, NUT OR SCREW
	FINISHED HEX HEX JAM HEX SLOTTED HEX THICK HEX THICK SLOTTED HEX CASTLE	REGULAR SQUARE HEX HEX JAM SEMI-FINISHED HEX HEX JAM HEX SLOTTED	HEAVY SQUARE HEX HEX JAM SEMI-FINISHED HEX HEX JAM HEX SLOTTED	MACHINE SCREW & STOVE BOLT NUTS	FINISHED & REGULAR SQ. BOLTS & HEX BOLTS SEMI-FINISHED HEX. BOLTS HEX CAP SCREWS	HEAVY BOLTS HEX SEMI-FINISHED HEX & FINISHED HEX	LAG BOLTS SQUARE	SET SCREWS SQUARE	
	Use wrench or socket size shown below				Use wrench or socket size shown below				
#0 & 1				5/32					#0 & 1
#2 & 3				3/16					#2 & 3
#4				1/4					#4
#5 & 6				5/16					#5 & 6
#8				11/32					#8
#10				3/8			9/32	3/16	#10
#12				7/16				7/32	#12
1/4"	7/16	7/16	1/2	7/16	†3/8 - 7/16		3/8	1/4	1/4"
5/16"	1/2	9/16	9/16	9/16	1/2		1/2	5/16	5/16"
3/8"	9/16	5/8	11/16	5/8	9/16		9/16	3/8	3/8"
7/16"	11/16	3/4	3/4		5/8		5/8	7/16	7/16"
1/2"	3/4	13/16	7/8		3/4	7/8	3/4	1/2	1/2"
9/16"	7/8	7/8	15/16		13/16			9/16	9/16"
5/8"	15/16	1	1 1/16		15/16	1 1/16	15/16	5/8	5/8"
3/4"	1 1/8	1 1/8	1 1/4		1 1/8	1 1/4	1 1/8	3/4	3/4"
7/8"	1 5/16	1 5/16	1 7/16		1 5/16	1 7/16	1 5/16	7/8	7/8"
1"	1 1/2	1 1/2	1 5/8		1 1/2	1 5/8	1 1/2	1	1"
1 1/8"	1 11/16	1 11/16	1 13/16		1 11/16	1 13/16	1 11/16	1 1/8	1 1/8"
1 1/4"	1 7/8	1 7/8	2		1 7/8	2	1 7/8	1 1/4	1 1/4"
1 3/8"	2 1/16	2 1/16	2 3/16		2 1/16	2 3/16		1 3/8	1 3/8"
1 1/2"	2 1/4	2 1/4	2 3/8		2 1/4	2 3/8		1 1/2	1 1/2"
1 5/8"	2 7/16	2 7/16	2 9/16		2 7/16	2 9/16			1 5/8"
1 3/4"	2 5/8	2 5/8	2 3/4		2 5/8	2 3/4			1 3/4"
1 7/8"	2 13/16	2 13/16	2 15/16		2 13/16	2 15/16			1 7/8"
2"	3	3	3 1/8		3	3 1/8			2"
2 1/4"	3 3/8	3 3/8	3 1/2		3 3/8	3 1/2			2 1/4"
2 1/2"	3 3/4	3 3/4	3 7/8		3 3/4	3 7/8			2 1/2"
2 3/4"	4 1/8	4 1/8	4 1/4		4 1/8	4 1/4			2 3/4"
3"	4 1/2	4 1/2	4 5/8		4 1/2	4 5/8			3"

†Regular Square Bolts Only.

4- and 8-Point Sockets Are Used on Square Bolt Heads, Nuts and Screw Heads.

6- and 12-Point Sockets Are Used on Hexagon Bolt Heads, Nuts and Screw Heads.

DECIMAL EQUIVALENTS *inches into decimals*

FRACTIONS	DECIMALS
1/64	.0156
1/32	.0312
3/64	.0468
1/16	.0625
5/64	.0781
3/32	.0937
7/64	.1093
1/8	.1250
9/64	.1406
5/32	.1562
11/64	.1718
3/16	.1875
13/64	.2031
7/32	.2187
15/64	.2343
1/4	.2500
17/64	.2656
9/32	.2812
19/64	.2968
5/16	.3125
21/64	.3281
11/32	.3437
23/64	.3593
3/8	.3750
25/64	.3906
13/32	.4062
27/64	.4218
7/16	.4375
29/64	.4531
15/32	.4687
31/64	.4843
1/2	.5000

FRACTIONS	DECIMALS
33/64	.5156
17/32	.5312
35/64	.5468
9/16	.5625
37/64	.5781
19/32	.5937
39/64	.6093
5/8	.6250
41/64	.6406
21/32	.6562
43/64	.6718
11/16	.6875
45/64	.7031
23/32	.7187
47/64	.7343
3/4	.7500
49/64	.7656
25/32	.7812
51/64	.7968
13/16	.8125
53/64	.8281
27/32	.8437
55/64	.8593
7/8	.8750
57/64	.8906
29/32	.9062
59/64	.9218
15/16	.9375
61/64	.9531
31/32	.9687
63/64	.9843
1	1.0000

METRIC EQUIVALENTS *millimeters into inches, decimals*

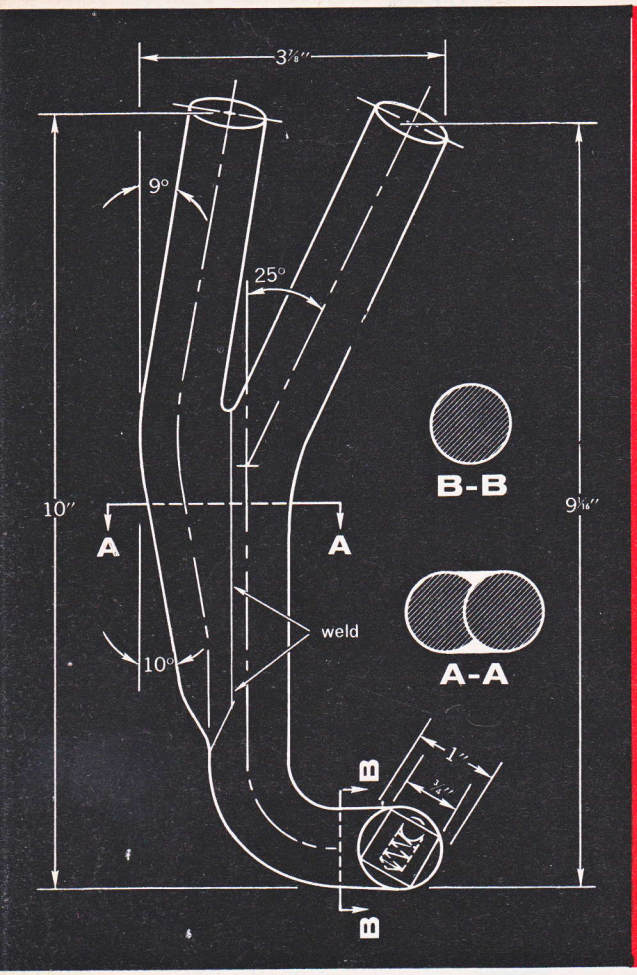
MILLIMETERS	DECIMALS
1	0.0394
2	0.0787
3	0.1181
4	0.1575
5	0.1968
6	0.2362
7	0.2756
8	0.3150
9	0.3543
10	0.3937
11	0.4331
12	0.4724
13	0.5118
14	0.5512
15	0.5905
16	0.6299
17	0.6693
18	0.7087
19	0.7480
20	0.7874
21	0.8268
22	0.8661
23	0.9055
24	0.9449
25	0.9842
26	1.0236
27	1.0630
28	1.1024
29	1.1417
30	1.1811
31	1.2205
32	1.2598
33	1.2992

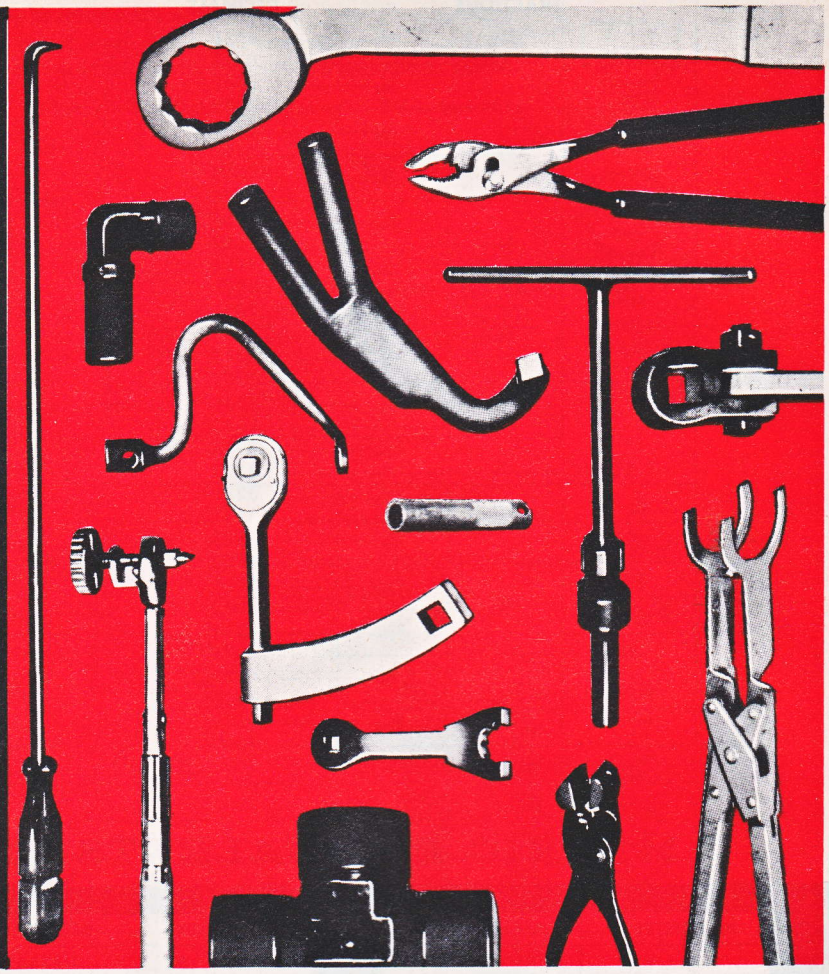
MILLIMETERS	DECIMALS
34	1.3386
35	1.3779
36	1.4173
37	1.4567
38	1.4961
39	1.5354
40	1.5748
41	1.6142
42	1.6535
43	1.6929
44	1.7323
45	1.7716
46	1.8110
47	1.8504
48	1.8898
49	1.9291
50	1.9685
51	2.0079
52	2.0472
53	2.0866
54	2.1260
55	2.1653
56	2.2047
57	2.2441
58	2.2835
59	2.3228
60	2.3622
61	2.4016
62	2.4409
63	2.4803
64	2.5197
65	2.5590
66	2.5984

MILLIMETERS	DECIMALS
67	2.6378
68	2.6772
69	2.7165
70	2.7559
71	2.7953
72	2.8346
73	2.8740
74	2.9134
75	2.9527
76	2.9921
77	3.0315
78	3.0709
79	3.1102
80	3.1496
81	3.1890
82	3.2283
83	3.2677
84	3.3071
85	3.3464
86	3.3858
87	3.4252
88	3.4646
89	3.5039
90	3.5433
91	3.5827
92	3.6220
93	3.6614
94	3.7008
95	3.7401
96	3.7795
97	3.8189
98	3.8583
99	3.8976
100	3.9370

Any Job that Calls for Accuracy Calls for

PROTO TOOLS
PROFESSIONAL QUALITY TOOLS





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In addition to the 2600 standard tools in this catalog, PROTO produces hundreds of special tools for all industries and the Government.

To duplicate or adapt a special tool you now have, submit a sample, information such as previous manufacturer, tool number, military or other specifications.

If the tool has never been made before, send a blueprint, drawing or sketch with dimensions, specifications and problem requirements.

Be sure to indicate which dimensions are critical. Cost savings can result from broad tolerances on non-critical dimensions.

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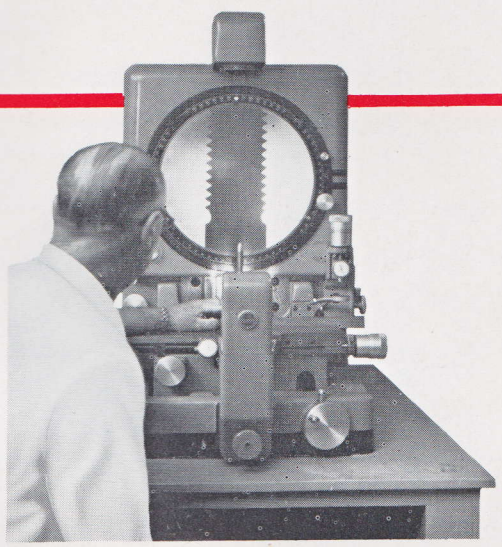
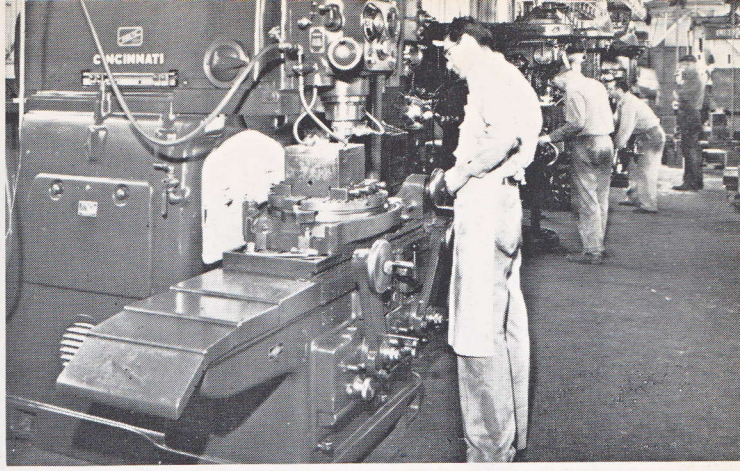
MODERN MANUFACTURING METHODS

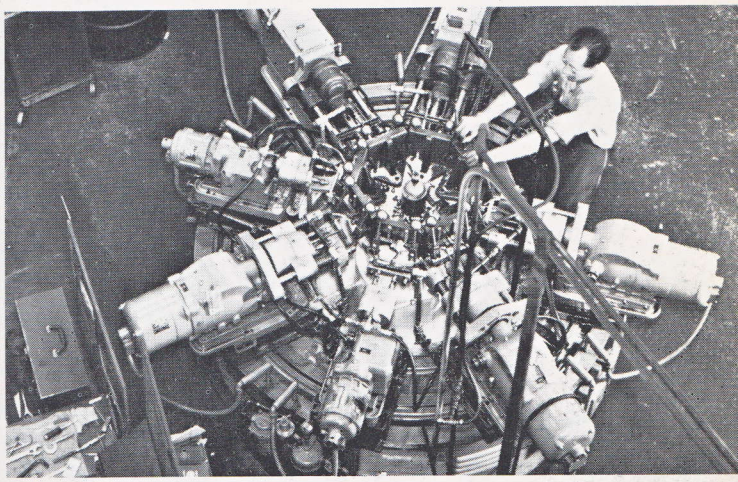
More than a half-century ago when PROTO tools were made in a small blacksmith shop, their professional quality was due to *skilled workmanship.* This continues to be the reason for PROTO'S leadership in the industry. In operations where machines can save time and money, and *improve quality*, PROTO uses the most efficient precision automatic machinery.



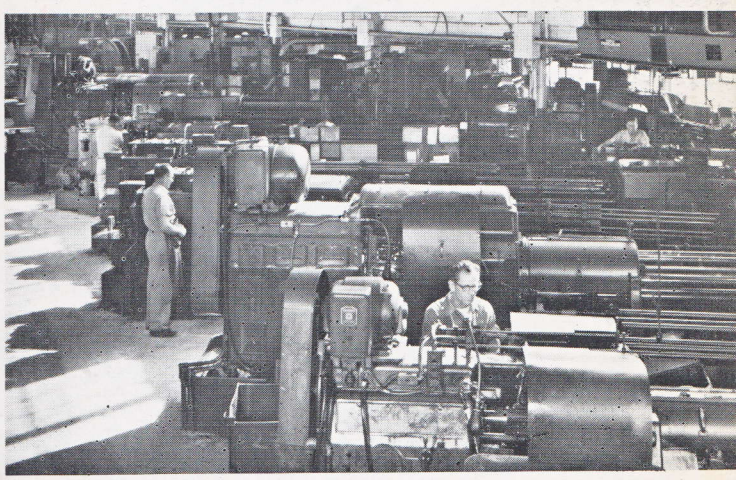
This contour projector is typical of the quality control equipment used by PROTO.



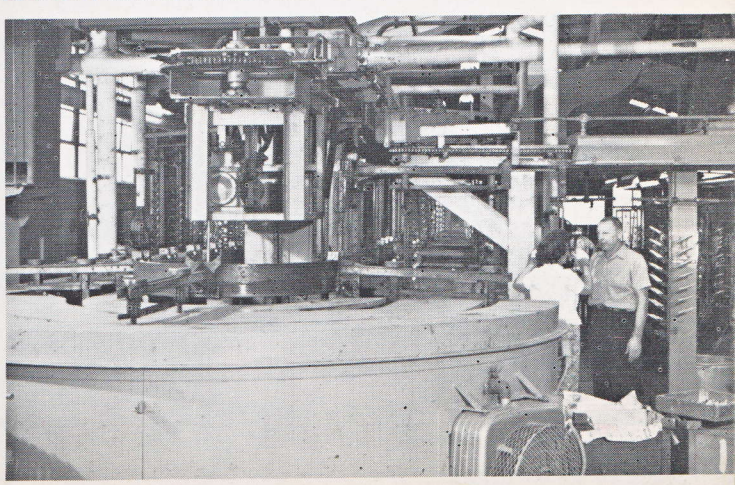
Modern milling machines in PROTO die sinking department.



Automated, precision machines keep quality up and cost down.



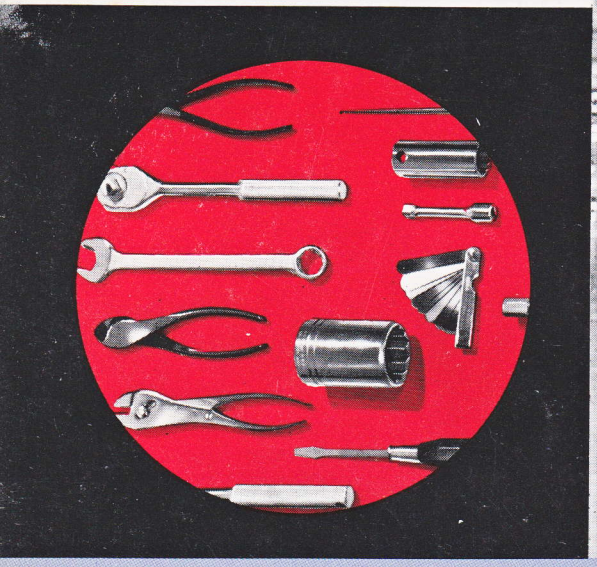
Section of automatic screw machine department at main plant.

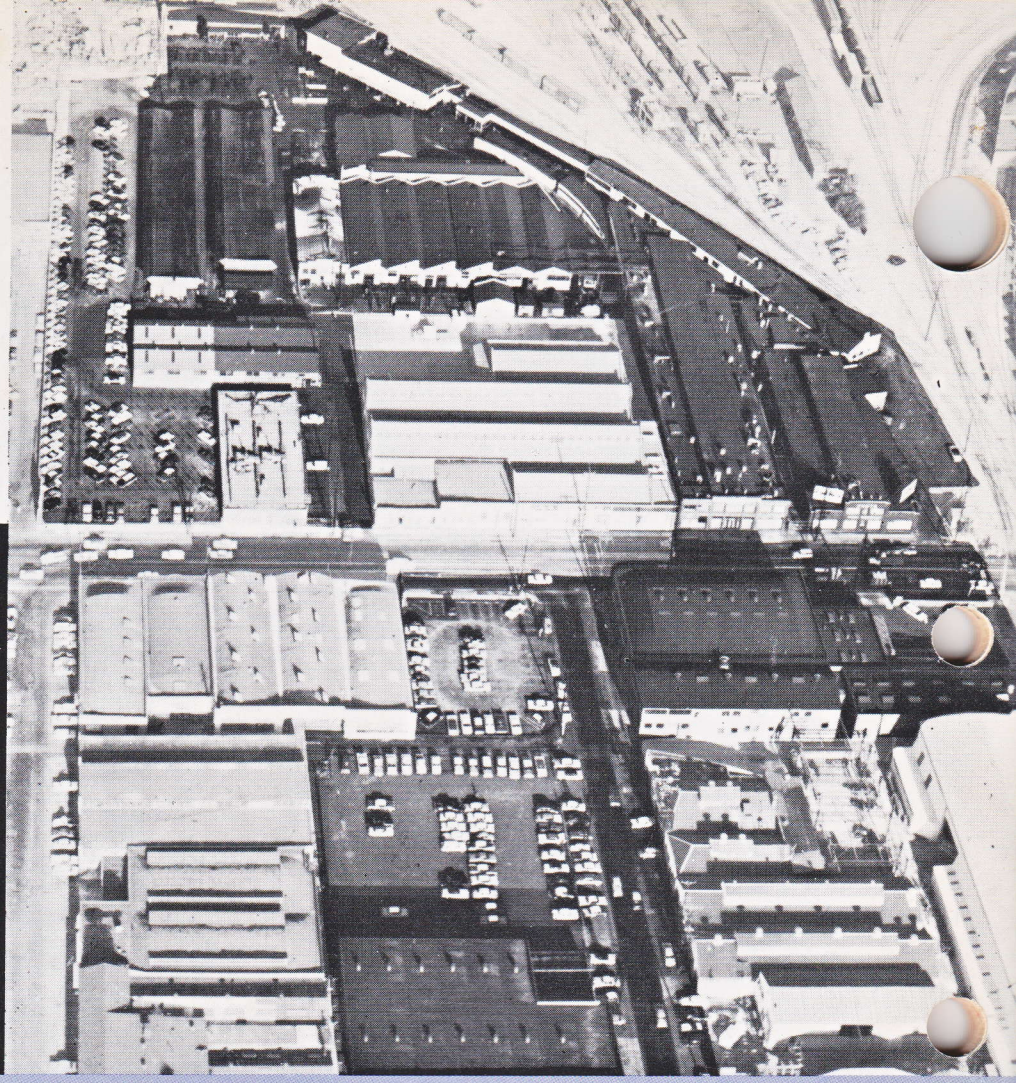


PROTO plates its own tools in this huge plating system.

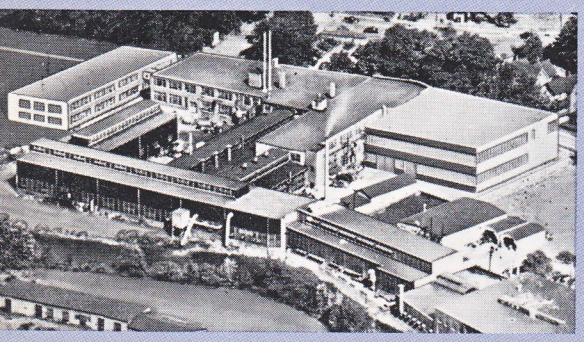
PROTO®

NATION-WIDE MANUFACTURING FACILITIES





Los Angeles, California, Factory and Main Offices



Jamestown, N.Y., Factory and Eastern Warehouse

London, Ontario, Factory (PROTO TOOLS OF CANADA, Ltd.)

Los Angeles, California, Special Tools Factory (ITM)

Since the firm was established in 1907 the demand for professional quality PROTO tools has increased until PROTO has become a world leader in its field. This professional quality and continually growing popularity of PROTO tools is due in large measure to the skilful workmanship and teamwork of PROTO employees, salesmen, alert distributors and dealers throughout North America and abroad.

PROTO® TOOLS
PROFESSIONAL QUALITY TOOLS

PROTO TOOL COMPANY
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Los Angeles, California 90054

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